OhioEPA
State of Ohio Environmental Protection Agency

Northwest District Office
347 North Dunbridge Road
P.O. Box 466
Bowling Green, Ohio 43402-0466
(419) 352-8461 FAX (419) 352-8468

George V. Voinovich
Governor

Re: Hazardous Waste
Lucas County

September 11, 1991

Mr. James Fox, Village Administrator
Village of Whitehouse
6655 Providence Street
P.O. Box 2476
Whitehouse, Ohio 43571

Dear Mr. Fox:

This letter is a follow-up to our recent telephone conversation concerning the Borden Chemical property located in Whitehouse. During its operating days, Borden's Whitehouse facility was a manufacturer of ink products. The company generated various hazardous waste and held an Ohio hazardous waste permit which allowed the facility to store these wastes in containers prior to their being shipped to an off-site licensed hazardous waste disposal facility.

During 1985 the company ceased operations. Several underground storage tanks which held various process chemicals remained on-site. During the mid 1980's, Borden conducted a self initiated cleanup of the site. The underground tanks were removed and soil and ground water was treated to remove contamination which had resulted from the leaking underground tanks. Additionally, a portion of the contaminated soil was removed and disposed of off-site.

Attached, please find a copy of a letter from this office to Borden acknowledging their cleanup efforts. It should be pointed out that their remediation of the site does not relieve any past or future owners from liability under either the Resources Conservation & Recovery Act (RCRA) or the Comprehensive Environmental Response Compensation & Liability Act (CERCLA).

If you have any further questions please contact me at 419 352-8461.

Yours truly,

Jeffery A. Steers, R.S.
Division of Solid and
Hazardous Waste Management

/pd

pc: NWDO File

IATT ENVIRONMENTAL, INC.

715 Spencer Str.
Toledo, Ohio 43609
(419) 381-9993

Closure Assessment Report
Borden Graphics Facility
6725 Gilead Street
Whitehouse, Ohio 43571

April 5, 1991

Prepared for: Borden Environmental Affairs
Mr. G.N. Starkey
1050 Kingsmill Parkway
Columbus, Ohio 43229-1143

TABLE OF CONTENTS

Introduction

IATT Environmental, Inc. was retained by Borden Chemical to provide professional services at Borden's Graphic Facility in Whitehouse, Ohio, for the removal, transportation, and disposal of two underground storage tanks with associated piping. The facility is located in Whitehouse, Ohio. This operation was conducted in accordance with the following regulatory guidelines:

(1) N.F.P.A. Code Section 30, Appendix C

(2) N.F.P.A. Code Section 327

(3) A.P.I. Recommended Practice 1604

(4) A.P.I. Recommended Practice 2015

(5) 40 C.F.R., Part 280, Subpart G

The Ohio State Bureau of Underground Storage Tank Regulations (BUSTR) was notified prior to the commencement of operations. A copy of the notification letter. The two tanks were exempt from Federal and State regulations because they contained heating oil for consumption on site. A copy of the state regulations containing this exemption are in Appendix I. The two tanks had capacities of 6000 and 1000 gallons. Figure 1 shows the configuration of the site. the former location of the tank, and associated piping.

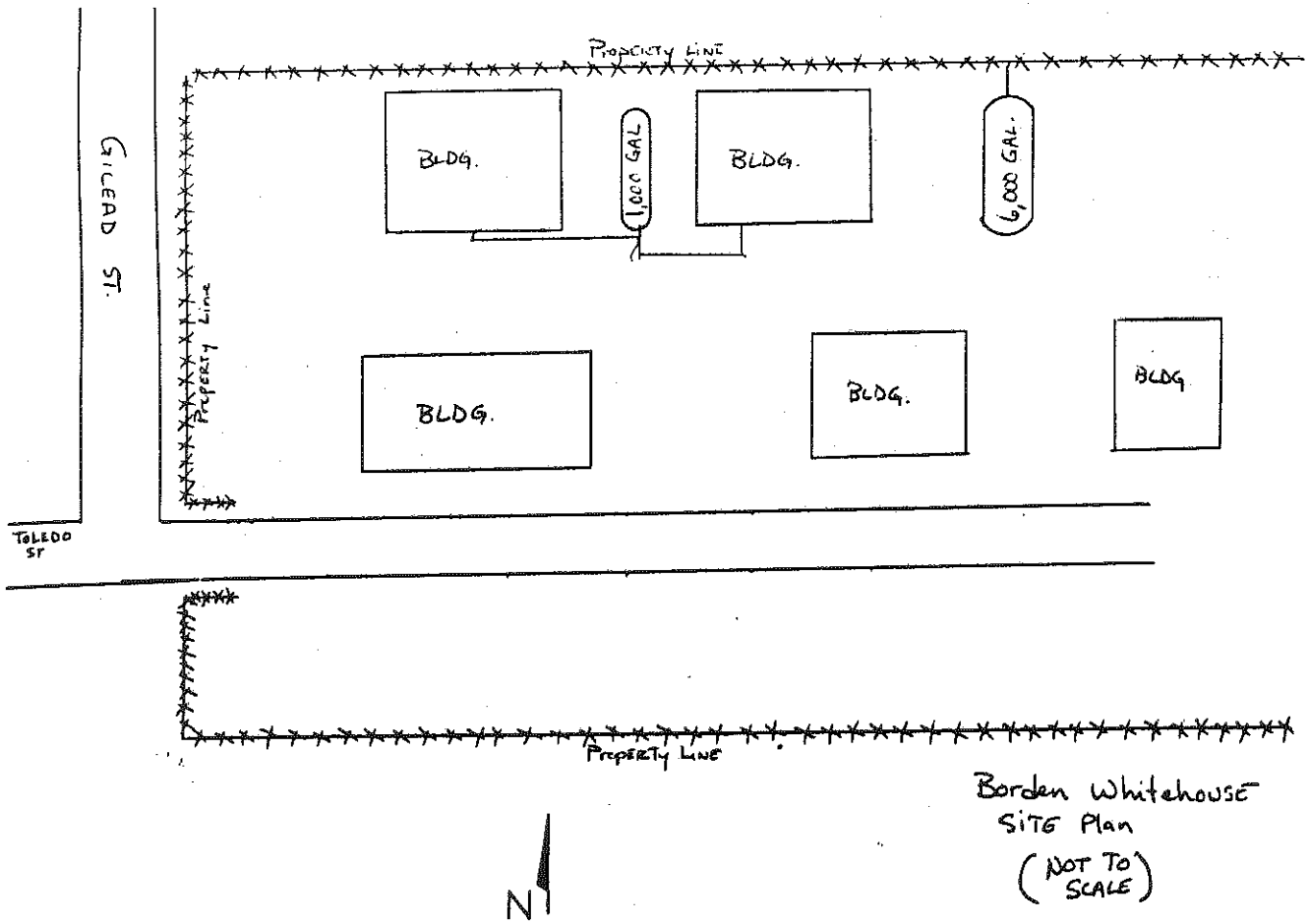


Figure 1) Site Configuration: Borden Graphics Facility, Whitehouse, Ohio.

The operations began on February 12, 1991, with a general site survey. During this survey, the volume of liquid in the tank was determined to be 600 gallons (approximately). The tank contained a oil-water mixture. The liquid from the tank was sampled to confirm that the mixture was non-hazardous prior to transportation. The oil was screened for hazardous characteristics, total lead content, and polychlorinated biphenols in accordance with the Code of Federal Regulations (Title 40, Part 261, Subparts C and D). The liquid was determined to be non-hazardous. Copies of the analytical reports upon which this determination is based are in Appendix I. The sample identification is BWH-164.

The operations continued on February 25, 1991, with the removal of all liquids by Michigan Pumping Services of Detroit, Michigan. All liquids in the tanks were pumped into a vacuum truck and transported to Usher Oil Company of Detroit, Michigan. Usher processes the waste water into lubricating products and fuel for resale. The Usher facility in Detroit is monitored by state and federal regulatory agencies. All proper federal and state regulations were observed during this transportation and disposal operation. The appropriate manifest is in Appendix I.

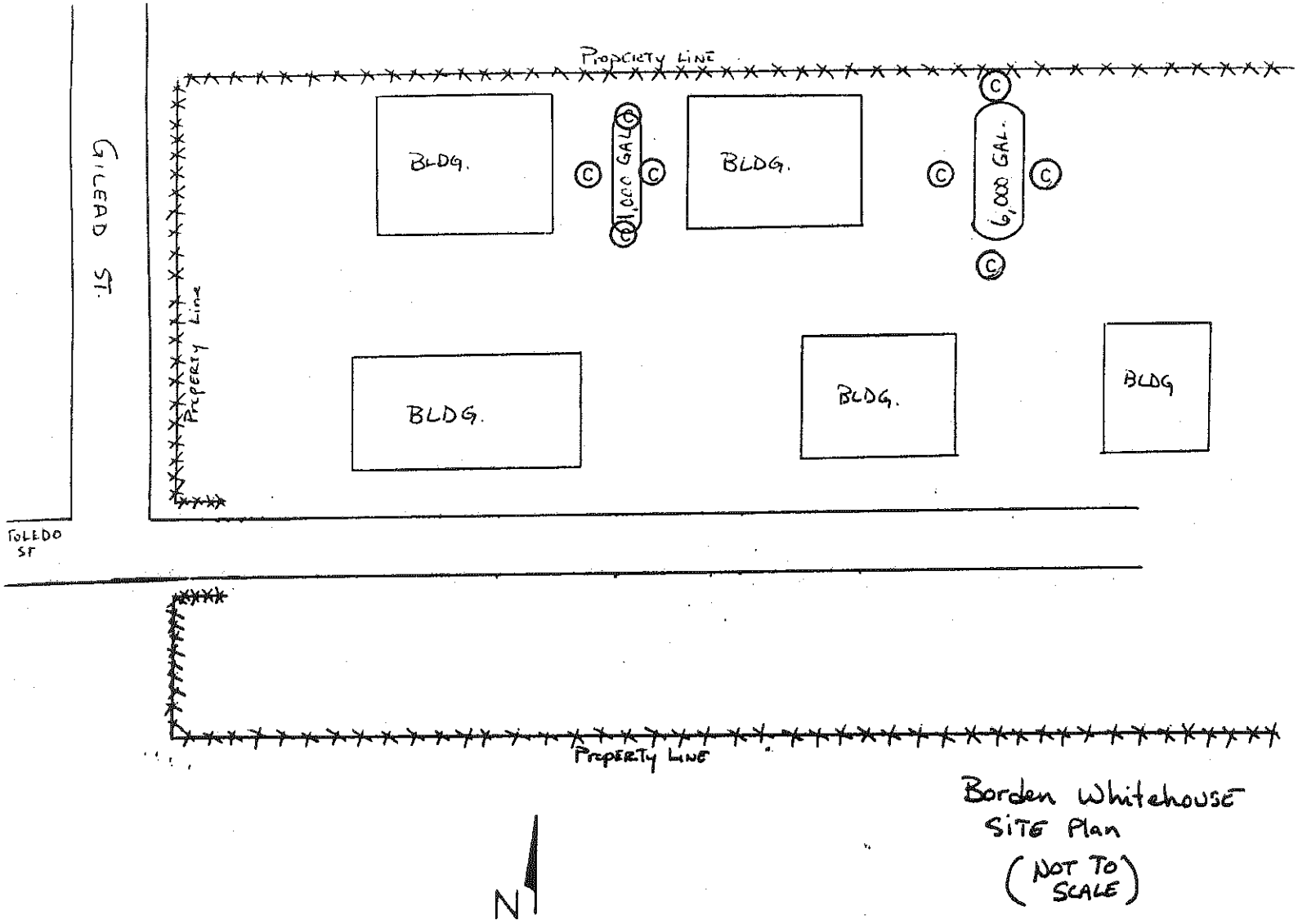


Figure 2) Sample stations for respective composite samples = c

The soil was excavated until the tanks and the associated piping were uncovered. The tanks were then filled with carbon dioxide gas to mitigate any explosion hazard. The atmosphere in the tanks were then tested with an MX 241 (ISC) portable explosion meter. The tanks were then removed and placed on plastic tarpaulin. The tanks were inspected and found to have several small holes. The pipes associated with the tanks were purged with carbon dioxide, checked for liquids, and then removed. According to Ohio Department of Commerce regulations, this tank was exempt from Bureau of Underground Storage Tank Regulation (BUSTR) protocols. A state fire marshall's office representative was not required to be present during removals. The tanks and piping were labeled and transported off-site to Nelson Crane Service, 5430 Stickney Avenue, Toledo, Ohio, for cleaning and destruction. At Nelson Crane Service, the tank was filled with carbon dioxide and tested with the portable explosion meter after cleaning. The atmosphere was determined to be non-explosive. The tanks and piping were then cut into scrap metal and transported to Edelstein Scrap Metal Services at 1320 Lagrange Street, Toledo, Ohio. The certificate of disposal is presented in Appendix I. Adequate fire protection equipment was present at the site when the tanks were cut up.

The excavations were not deep enough to reach groundwater. There are no groundwater problems on the site related to these tanks.

A soil sampling program was performed to determine the potential for petroleum hydrocarbon contamination in the sediment surrounding the tanks. IATT was represented by Tom Corcoran, a qualified technician. Soils were characterized with a portable Photovac Photoionization detection device (PID). The sampling and excavation procedure was conducted on March 13, 1991. This procedure consisted of the measurement of the hydrocarbon concentrations of the exposed soil across the lateral extent of the excavation. When this initial set of field measurements were above local "background" levels of hydrocarbons (approximately 20 parts per million), more soil was excavated and a second set of measurements was taken. The contaminated soil was placed on plastic tarpaulins for later disposal. The second set of field measurements were below the local "background" levels. The sampling station locations are displayed in Figure 3. The PID results of the second sampling procedure are displayed in Table 1.

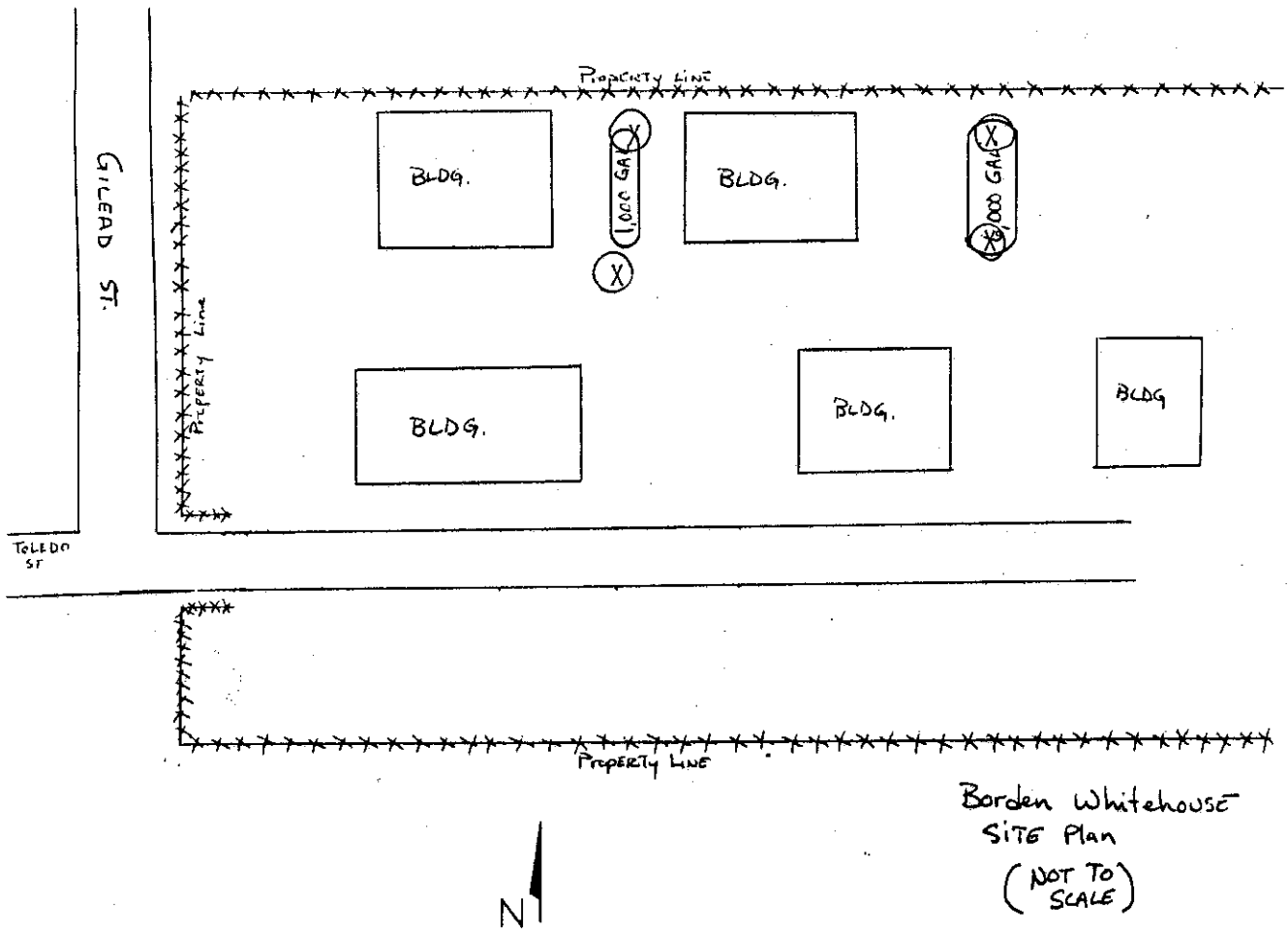


Figure 3) Sampling Locations: Borden Graphics Facility

Table 1: PID Readings

First Sampling	#1	50.9 ppm
	#2	71.3 ppm
	#3	41.4 ppm
Second sampling	#4	5.3 ppm
	#5	2.9 ppm
	#6	6.7 ppm

After a second set of field measurements were taken with the PID, the walls and floors of the excavations were scraped clean of loose soil and sampled in the same locations as the PID measurements. These soil samples were then put into polyethylene containers with teflon lids providing as little headspace as possible to minimize contaminant loss due to volatilization. The samples were cooled to four degrees Celcius until shipment to Belmonte Parks located at 11 Main Street, Dayton, Ohio.

The samples were analyzed in accordance with US Environmental Protection Agency protocols as described in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods" (SW-846, Third Edition). Samples were analyzed for total petroleum hydrocarbons (TPH) by Method 418.1 after extraction by Method 9071. This is a standard method for closure assessments.

Contaminated Soil Pile Characterization

In an effort to characterize the contaminated soil for disposal purposes, multiple soil samples were taken across the lateral and vertical extent of the pile. These soil samples were composited into one polyethylene container with a teflon lid providing as little headspace as possible to minimize contaminant loss due to volatilization. The sample was cooled to four degrees Celcius until shipment to BEC Laboratories, 615 Front Street, Toledo, Ohio.

The sample was analyzed in accordance with US Environmental Protection Agency protocols as described in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods" (SW-846, Third Edition). The sample was analyzed for total petroleum hydrocarbons (TPH) by Method 418.1 after extraction by Method 9071, total sufides by Method 9030, flashpoint by Method 1020, and paint filter test by Method 9095. The report of the analytical results are contained in Appendix I.

These specific analytical tests are required for approval at the selected disposal site: Waste Management's Evergreen Landfill Facility at 2625 East Broadway, Toledo, Ohio. The paperwork for this soil's disposal (including the manifest) is in Appendix I.

Results

The results of the laboratory analysis of the soil samples indicate that all the contaminated soil with hydrocarbon concentrations greater than 20 parts per million have been removed.

The results of all the tests are displayed in Table 2. Hard copies of the lab analysis are presented in Appendix II along with the accompanying chain of custody.

Table 2: Total Petroleum Hydrocarbons

Sample ID	Measured Quantities	Detection Limits
North End - 6,000	none	20 mg/Kg
South End - 6,000	none	20 mg/Kg
Composite - 6,000	none	20 mg/Kg
North End - 1,000	none	20 mg/Kg
South End - 1,000	none	20 mg/Kg
Composite - 1,000	none	20 mg/Kg

Sediment Characterization

The sediment presented on the site consists of a loamy fine sand to depth of 40 inches. Below 40 inches the sediment consists of a dark-brown, gray, silty clay.

Conclusions

The two tanks and associated piping were removed from the Borden Graphics Facility without incident. All work was done in full compliance with all existing conventions for safety and procedures. The tank "fill" soils were excavated following discovery of petroleum hydrocarbons. The results from the laboratory analysis of the soil samples extracted from both cavities indicate levels of petroleum hydrocarbons in the remaining soil are less than 20 parts per million. However, neither the tanks nor the material that was in them was regulated, therefore no further action is required by state or federal regulations. Any residual concentrations of petroleum hydrocarbons that may exist in the sediment (at concentrations of less than 20 parts per million) represent no threat to public welfare. No further remedial action is deemed necessary.

Our professional services have been performed, our findings obtained, and our recommendation prepared in accordance with generally accepted and customary principles and practices in the fields of environmental science. This warranty is in lieu of all other warranties either expressed or implied. This company is not responsible for the independent conclusions, opinions, or recommendations made by others based on the data presented in this report.

Respectfully submitted,

Charles E. Sorensen

Charles E. Sorensen,
Vice-President

PHOTOGRAPHIC SECTION

APPENDIX I

Ohio Administrative Code: 1301: 7 - 7 - 35

REMOVAL OF UNDERGROUND STORAGE TANKS CONTAINING FLAMMABLE AND COMBUSTIBLE LIQUIDS

1. Notify the State Fire Marshal at least 30 days before beginning permanent closure or a change-in-service, of intent to permanently close or make a change-in-service of an underground storage tank.

2. Obtain a permit from the local fire official and arrange for an inspector to be on site. If a permit and/or inspector cannot be supplied by the local officials the owner will need to contact the State Fire Marshal, Inspection Bureau, at (800) 282-1927 to obtain the permit and inspector.

3. The tank(s) shall be removed from the property in a manner approved by the fire official and the site restored in an approved manner. When the fire official determines that the removal of the tank(s) is not necessary, he may permit the tank(s) to be abandoned in place in accordance with API 1604.

4. The new federal tank rules require that before permanent closure is completed the owners and operators must measure for the presence of a release where contamination is most likely to be present at the underground storage tank site.

5. If petroleum contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered, the owner and operator must begin corrective action and notify the local fire official and the State Fire Marshal.

If your underground storage tank meets the following definitions you will need to follow steps 1, 2, 3, 4, and 5.

"Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. The following tanks are excluded by definition:

[a] *Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;*

[b] *Tank used for storing heating oil for consumptive use on the premises where stored;*

[c] *Septic tank;*

IATT ENVIRONMENTAL, INC.

715 Spencer Str.
Toledo, Ohio 43609
(419) 381-9993

Feburary 6, 1991

Bureau of Underground Storage
Tank Regulations (BUSTR)
7510 E. Main Street
Reynoldburg, OH 43068

Dear Sirs:

Personnel of I.A.T.T. will begin a UST removal operation at a Northwestern, Ohio facility and are providing a 30 day notification of such activity. The facility is located at:

Facility Name: Borden Graphics Facility
Address: 6725 Gilead Street
Whitehouse, Ohio 43571
County: Lucas
Number of Tanks: 2
Size of Tanks: 1000 gallons and 6000 gallon
Type of Material: Heating Oil

If you have any questions regarding this inquiry, please do not hesitate to call. Thank you for your attention to this matter.

Sincerely,

Thomas Corcoran

Thomas Corcoran
Technical Services/Safety Director
I.A.T.T., Inc.

ab

BELMONTE PARK LABORATORIES
11 EAST MAIN STREET
TROTWOOD, OHIO 45426

Attn: M_LAKE
Phone: (513) 837-3744 FAX# 837-1071

I.A.T.T.
715 SPENCER ST.
TOLEDO, OHIO 43609

Attn: LARRY ZINK

Purchase Order: BWH-164
Invoice Number:

Order #: 91-02-173
Date: 02/22/91 15:07
Work ID: BWH-164
Date Received: 02/13/91
Date Completed: 02/22/91

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	BWH-164 02/09/91		

ENCLOSED ARE THE RESULTS OF SPECIFIED SAMPLES SUBMITTED FOR ANALYSES. IF YOU HAVE ANY QUESTIONS, PLEASE ADVISE. USE THE "LAB #" FOR FASTER IDENTIFICATION.
OHIO EPA CERTIFICATION NUMBER : 836 & 837

M. Lake
Certified By
MATTHEW LAKE

TEST RESULTS BY SAMPLE

Sample: 01A BWH-164 02/09/91 Collected: 02/13/91

Test Description	Result	Limit	Units	Analyzed	By
ARSENIC	0.05		MG/L		
CADMIUM	0.10		MG/L		
CHLORINE, ORGANIC	< 0.05		%		
CHROMIUM, TOTAL	0.5		MG/L		
FLASH POINT	>140		DEGREE F		
LEAD, TOTAL	0.5		MG/L		
OILY WASTE PREP FEE	METHOD		OF PREPARATION		
PCB	-		SEPARATE REPOR		

I.A.T.T.
715 SPENCER STREET
TOLEDO, OHIO 43609

BELMONTE PARK LABORATORIES
11 EAST MAIN STREET
TROTWOOD, OHIO 45426
(513) 837-3744

REPORT TO: LARRY ZINK
REPORT ON: BWH-164
02/09/91

DATE RECEIVED: 02/13/91
DATE REPORTED: 02/21/91

LAB# 9102173-01A

OHIO CERT# 836 & 837

SAMPLE ID: BWH-164

RESULTS BY SAMPLE

PCB

PCB 1016	<	2	MG/KG
PCB 1221	<	10	MG/KG
PCB 1232	<	2	MG/KG
PCB 1242	<	2	MG/KG
PCB 1248	<	2	MG/KG
PCB 1254	<	2	MG/KG
PCB 1260	<	2	MG/KG

METHOD: EPA 8080/3540

J. MATTHEW LAKE
LABORATORY MANAGER

COMPLETED REPORT

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Act 64 PA 1979, as amended and Act 136 PA 1969

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136 PA 1969

Please print or type.

Form Approved. OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: OHD004204175 — Manifest Document No.: 10291
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Borden Inc. Former Graphics Facility 6725 Gilead Road Whitehouse, Ohio 43571
4. Generator's Phone (614) 431-6666

A. State Manifest Document Number: MI 2302705
B. State Generator's ID:

5. Transporter 1 Company Name: Michigan Pumping
6. US EPA ID Number: MID010871234
C. State Transporter's ID:
D. Transporter's Phone: 313-675-0220

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Usher Oil Co. 5000 Roselawn Detroit, Michigan 48214
10. US EPA ID Number: MID001698014
G. State Facility's ID:
H. Facility's Phone: 313-834-7055

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. Combustable liquid Oil NOS UN1270		001	TT	01600	G	020L	N
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

#2 Heating oil UST removal

K. Handling Codes for Wastes Listed Above: a/ b/ c/ d/

15. Special Handling Instructions and Additional Information

Emergency Contact 419-381-9002

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Date Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul Dressar | Signature | Date Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Date Month Day Year

EPA Form 8700-22 (Rev. 9/88)

IN CASE OF EMERGENCY OR SPILL, CONTACT THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 OR OUT OF STATE AT 517-373-7660 AND THE ... AT 1-800-292-4706 ... MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN ... 1-800-424-8802 24 HOURS PER DAY.

IATT ENVIRONMEN IL, INC.
715 Spencer St.
Toledo, Ohio 43609
(419) 381-9993

CERTIFICATE OF DISPOSAL

This document certifies that the two underground storage tanks and their associated piping from the Borden Graphics Facility, 6725 Gilead Street, Whitehouse, Ohio, were cut into scrap metal on March 27, 1991, at Nelson Crane Service, 5430 Stickney Avenue, Toledo, Ohio. The scrap metal was then transported to Edelstein Scraps Metal Services, 1320 Lagrange Street, Toledo, Ohio.

.ustrial Assessment Treatme
15 Spencer Street - Suite B
Toledo, OH 43609

': Larry A. Zink

Technologi

biological & environmental control laboratories, inc.
615 front street
toledo, ohio 43605
(419) 693-5307

1632 enterprise parkway
twinsburg, ohio 44087
(216) 425-8200

lab no. 91T01944
p.o. no. BWH-164

sample description: Bordon, Inc. - Job # BWH-164 - contaminated soil pile - 2/25/91 @ 1400

results:

Analyte	Method	Result
Flash Point	SW-846, 1020	greater than 180°F
Paint Filter Test	SW-846, 9095	passed test
Total Petroleum Hydrocarbons	EPA-600, 418.1	4000 mg/Kg

date completed: 2/26/91

approved by:

Industrial Assessment Treatment Technologies
715 Spencer Street, Suite B
Toledo, OH 43609

ATTN: Larry A. Zink

biological & environmental control laboratories, inc.
615 front street
toledo, ohio 43605
(419) 693-5307

1632 enterprise parkway
twinsburg, ohio 44087
(216) 425-8200

lab no. 91T02286
p.o. no. BWH-164

sample description: Borden, Inc. - Job # BWH-164 - contaminated soil pile - 2/25/91 @ 1400 (additional test to Lab No. 91T01944)

results:

Analyte	Method	Result
Total Sulfides	SW-846, 9030	62 mg/Kg

date completed: 3/6/91

tech: CAW

GENERATOR'S CERTIFICATION OF REPRESENTATIVE SAMPLE

PLEASE PRINT IN INK OR TYPE

(Shaded area for WMNA use only) WMNA Sales Rep. #:

WMA 30194
Waste Profile Sheet Code

This completed form must be returned, with the representative sample, to:

_____

_____

_____

INSTRUCTIONS FOR COMPLETING THIS FORM ARE FOUND ON THE OPPOSITE SIDE. In order to determine whether Waste Management of North America (WMNA) can accept the Special Waste described in the Generator's Special Waste Profile Sheet referenced above, you must supply a representative sample of the waste, or sign Part E below certifying that analytical data presented to Waste Management were derived from testing of a representative sample. A representative sample is defined as a sample obtained using any of the applicable sampling methods specified in Federal, State or Provincial Regulations. If you collect a representative sample of your waste, apply the peel off label and ship your sample along with this form to the address noted above. If you have any questions, please refer to the instructions for this form, or contact your WMNA sales representative.

A. SAMPLING METHOD (Indicate the method used and sign line 5 in Section C to certify a representative sample was taken)

1. ☐ I have obtained a representative sample of the waste material described in the Generator's Special Waste Profile Sheet referenced above according to the sampling methods specified in 40 CFR 261-Appendix I or equivalent Canadian rules.
2. ☒ I have obtained a representative sample of the waste material described in the Generator's Special Waste Profile Sheet referenced above by an equivalent method.

B. SAMPLING SOURCE (e.g., drum, lagoon, pit, pond, tank, vat)

Excavation

C. REPRESENTATIVE SAMPLE CERTIFICATION AND SAMPLE LABEL (COMPLETE LABEL BEFORE REMOVING)

1. Waste Profile Sheet Code:	WMA 30194 (OLD WMA 103456)	1. Waste Profile Sheet Code:
2. [redacted] Generator's Name:	Borden Ink Plant	2. Generator's Name:
3. [redacted] Name of Waste:	contaminated soil - heating oil	3. Name of Waste:
4. [redacted] Sample Hour/Date:	1400 Feb. 26, 1991	4. Sample Hour/Date:
5. [redacted] Sampler's Signature:	T Corcoran	5. Sampler's Signature:

6. Print Sampler's Name: THOMAS CORCORAN
7. Sampler's Title: Technical Services Director
8. Sampler's Employer (if other than generator, see D. below): I.A.I.T. Environmental Inc.

D. WITNESS VERIFICATION (if required) In most circumstances the customer will obtain the sample. However, in those cases in which WMNA or another contractor obtains the sample, one of the customer's employees must be present to direct the particular source to be sampled, to witness the sampling, and to complete this Part D.

I was personally present during the sampling described. I directed the waste source to be sampled, and I verify the information noted above.

1. Witness' Signature: _____
2. Witness' Name: _____ 3. Witness' Title: _____
4. Witness' Employer: _____ 5. Date: _____

E. REPRESENTATIVE DATA CERTIFICATION (Complete Parts A, B, & C to the extent possible)

By signing below the customer is certifying that:

The analytical data presented to Waste Management of North America were derived from testing of a representative sample taken accordance with one of the methods listed in Part A of this form.

G Starkey
Signature

ENVIRONMENTAL AFFAIRS
Title

GERALD STARKEY
Name

MARCH 22, 1991
Date

GENERATOR'S SPECIAL WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

E. CHEMICAL COMPOSITION

1.	RANGE MIN.-MAX.
Soil	90 - 99 %
heating oil	10 - 1 %
	- %
	- %
	- %
	- %
	- %
	- %
	- %
	- %
	- %
	- %

Please note: The chemical composition total in the maximum column must be greater than or equal to 100%. Total: 100 %

2. Does this waste contain any of the following (provide concentration if known):

	NO or	LESS THAN or	ACTUAL
PCB's	☒	☐ <50 ppm	____ ppm
Cyanides	☒	☐ <50 ppm	____ ppm
Sulfides	☐	☐ <50ppm	62 ppm
Phenolics	☒	☐ <50 ppm	____ ppm

METALS

1. Does this waste contain any of the following metals (provide concentration if known):

Arsenic	☒ <5	or .05 ppm	Barium	☒ <100	or ____ ppm	Cadmium	☒ <1	or .10 ppm
Chromium	☒ <5	or .10 ppm	Lead	☒ <5	or 0.5 ppm	Mercury	☒ <0.2	or ____ ppm
Selenium	☒ <1	or ____ ppm	Silver	☒ <5	or ____ ppm	Copper	☐	____ ppm
Nickel	☐	____ ppm	Zinc	☐	____ ppm			____ ppm

2. Indicate method used to determine concentration (if provided): ☐ EP TOX ☐ TCLP, or ☒ Total TC.

G. GENERATOR CERTIFICATION

By signing this profile sheet, the generator certifies that unless clearly stated above or in attachments:

1. This waste is not a "Hazardous Waste" as defined by USEPA or Canadian Federal regulation and/or the state/province.
2. This waste does not contain regulated quantities of PCB's (Polychlorinated Biphenyls).
3. This sheet and its attachments contain true and accurate descriptions of the waste material. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed.
4. The Contractor's Definition of Special Waste (Form WMNA 0038 AD) has been read, signed and attached.

X 5. Signature: Gerald Starkey

6. Title: ENVIRONMENTAL ENGINEER

Name (Type or Print): GERALD STARKEY

8. Date: MARCH 22, 1991

Form WMNA-0089A (2/89) Waste Management North America

GENERATOR'S SPECIAL WASTE PROFILE SHEET

TYPE A Waste

PLEASE PRINT IN INK OR TYPE

WMA 30194

Waste Profile Sheet Code

(UCTIONS FOR COMPLETING THIS FORM ARE ATTACHED

(Shaded Areas For WMNA Use Only)

Renewal Date of Service Agreement:

WMNA Sales Rep#:

A. WHERE IS THE WASTE GENERATED?

1. Generator Name: Borden Ink Plant / Graphics Facility
2. Facility Address (site of waste generation): 6725 Gilead St.
3. Generator City, State/Province: Whitehouse, Ohio
4. Zip/Postal Code: 43571
5. Generator USEPA/Federal ID: OHD068061595
6. Generator State/Province ID: Ohio
7. Technical Contact: Gerald N. Starkey
8. Phone: (614) 431-6673

B. WHERE ARE WASTE MANAGEMENT, INC. INVOICES SENT?

1. ☐ Generating Facility (A, above), or
2. Company Name: I.A.T.T. Environmental Inc.
3. Phone: (419) 381-9993
4. Address: 715 Spencer St. Suite B
5. Generator City, State/Province: Toledo, Ohio
6. Zip/Postal Code: 43609

C. PHYSICAL CHARACTERISTICS OF WASTE (See Instructions)

1. Name of Waste: Contaminated Soil - heating oil
2. Process Generating Waste: Underground Storage tank
3. Special Handling Instructions:

4. Color	5. Does the waste have a strong incidental odor?	6. Physical State @ 70°F/21°C:	7. Layers	8. Specific Gravity:	9. Free Liquids:
Brown	☒ No ☐ Yes if so, describe:	☒ Solid ☐ Semi-Solid ☐ Liquid ☐ Powder Other:	☐ Multi-layered ☐ Bi-layered ☒ Single Phased	Range –	☐ Yes ☒ No Volume: %

10. pH: ☐ ≤ 2 ☐ > 2-4 ☐ 4-7 ☐ 7 ☐ 7-10 ☐ 10- < 12.5 ☐ ≥ 12.5 ☐ Range ☐ NA

11. Flash Point: ☐ None ☐ <140°F/60°C ☒ 140°-199°F/60°-83°C ☐ ≥ 200°F/93°C ☐ Closed Cup ☐ Open Cup

D. TRANSPORTATION INFORMATION

1. Method of Shipment: ☐ Bulk Liquid ☐ Bulk Sludge ☒ Bulk Solid ☐ Drum/Box ☐ Other
2. Annual Amount/Units: One time only - approx. 30 yards
3. Supplemental Information:

4. Is this a DOT hazardous material? ☒ No ☐ Yes (If so, complete 5, 6 &7) 5. Hazard Class/ID #:
6. Reportable Quantity/ Units (lb/kg): 7. Shipping Name:

☐ ck this box if additional information is attached.

Turn Page and Complete Side 2

APPENDIX II

University
LABORATORIES

Report of Analysis

Submitted by: IATT Environmental, Inc.
715 Spencer St.
Toledo, Ohio 43609

Project Name: Borden, Inc.

Sample Identification: Soil Samples

Date Received: March 15, 1991

U.L. No.: Please see attached.

Analysis Requested: Total Petroleum Hydrocarbons (TPeH)

Results: Please see attached.

Date: March 21, 1991

UNIVERSITY LABORATORIES

Bijan Sedghi, M.S.
Director of Laboratories

University
LABORATORIES

Project Name: Borden, Inc.

UL No.: UL006233-35

Date Received: 3/15/91
Date Reported: 3/21/91

Sample Identification	Total Petroleum Hydrocarbons, TPeH mg/Kg (ppm)
North End - 1000 Gal. Tank	<20
South End - 1000 Gal. Tank	<20
Composite - 1000 Gal. Tank	<20

"<" denotes "less than".

Detection Limit: 20 mg/Kg (ppm)

Analysis Method: Method 418.1

University
LABORATORIES

Project Name: Borden, Inc.

UL No.: UL006230-32

Date Received: 3/15/91
Date Reported: 3/21/91

Sample Identification	Total Petroleum Hydrocarbons, TPeH mg/Kg (ppm)
North End - 6000 Gal. Tank	<20
South End - 6000 Gal. Tank	<20
Composite - 6000 Gal. Tank	<20

"<" denotes "less than".

Detection Limit: 20 mg/Kg (ppm)

Analysis Method: Method 418.1

9555 HAGGERTY RD., BELLEVILLE, MICHIGAN 48111 • (313) 697-5115 • FAX: (313) 697-5117

REQUEST FOR LABORATORY
ANALYTICAL SERVICES

L[illegible]T, Inc.

Purchase Order No. BWH164 | Client Job No. BWH-164

SEND samples TO
Name: Bijan
Company: University labs | Dept.
Address: 9555 HAGGERTY Rd.
City, State, Zip: Belleville, Michigan 48111

client
Name: Gerald STARKEY | Title
Company: BORDEN, Inc. | Dept.
Mailing Address: 1050 Kingsmill PARKWAY
City, State, Zip: Columbus, Ohio 43229
Telephone No. | Telefax No.

Date Results Required: | Rush Charges Authorized? ☐ Yes ☐ No

Special Instructions: (method, limit of detection, phone results, rush results, etc.)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	COMP	GRAB	SAMPLE TYPE (MATRIX)	Number of Containers	TPH	BTEX	O
North end - 6000 gal. tank	3/13			✓	Soil	1	✓	✓	
South end - 6000 gal. tank	3/13			✓	Soil	1	✓	✓	
Composite - 6000 gal. tank	3/13		✓		Soil	1	✓	✓	
North end - 1000 gal. tank	3/13			✓	Soil	1	✓	✓	
South end - 1000 gal. tank	3/13			✓	Soil	1	✓	✓	
Composite - 1000 gal. tank	3/13		✓		Soil	1	✓	✓	

CHAIN OF CUSTODY (if required)
Relinquished by: [signature] | Date/Time 3/14/91 1205
Relinquished by: | Date/Time
Method of Shipment:

Received by: [signature] | Date/Time
Received at lab by: [signature] | Date/Time 3/15/91
Additional Comments:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Please return completed form and samples to Industrial Assessment & Treatment Technologies, Inc.

715 Spencer St.-Suite
Toledo, Ohi[illegible] 43609
419-[illegible]93

OhioEPA
State of Ohio Environmental Protection Agency

MEETING NOTES

SHEET ____ OF ____

DATE: ____ INITIALS: ____

SUBJECT: BORDEN CHEMICAL
LUCAS CO.

DATE: 11-27-89 LOCATION ____

ATTENDANCE:
Gerry Starkey
Pam Dorner

BORDEN

GERRY STARKEY
ENVIRONMENTAL ENGINEER
ENVIRONMENTAL AFFAIRS

BORDEN PACKAGING and INDUSTRIAL PRODUCTS
DOMESTIC AND INTERNATIONAL
DIVISION OF BORDEN, INC.

~~165 N. WASHINGTON AVE.~~
COLUMBUS, OHIO ~~43215~~
~~614-225-4075~~
614-431-6666

TOPICS DISCUSSED	ACTION/NOTES

Have removed several USTs & contaminated soil. Performed bioremediation. (OEPA knew nothing of clean up)

Now want to sell property & want letter from OEPA "approving" remediation performed. I explained that OEPA does not issue letters of approval. Told Mr. Starkey to submit results to me, and I would look at results, & if appropriate, issue a letter of concurrance w/ voluntary action w/ a clause specifically not releasing company from possible future liability.

Mr. Starkey will be sending in copies of results.

EPA 2305

(cont. reverse side)

OhioEPA
State of Ohio Environmental Protection Agency

Northwest District Office
1035 Devlac Grove Dr.
Bowling Green, Ohio 43402
(419) 352-8461

Richard F. Celeste
Governor

Re: Lucas County
Bordan Packaging &
Industrial Products

December 21, 1989

Mr. Gerald N. Starkey
Borden Packaging and Industrial Products
1050 Kingsmill Parkway
Columbus, Ohio 43229-1143

Dear Mr. Starkey:

The Ohio EPA has reviewed the documents submitted to us regarding the remediation undertaken at the former Borden facility in Whitehouse, Ohio.

It appears that the bioremediation conducted in 1986 effectively reduced the contamination resulting from the ten excavated underground storage tanks. Also, the lead-contaminated soils appear to have been removed, and the 1989 analysis for E.P. Toxicity is acceptable.

Although this office concurs with the remediation scenario undertaken at the former Borden facility, this letter should in no way be construed to release the owner from any liability associated with past operations at this facility.

If I may be of further assistance, please contact me at (419) 352-8461.

Sincerely,

Pamela A. Doerner

Pamela A. Doerner
Division of Emergency and
Remedial Response

/ckl

cc: NWDO File

BORDEN PACKAGING and INDUSTRIAL PRODUCTS
DOMESTIC AND INTERNATIONAL
DIVISION OF BORDEN, INC.

GERALD N. STARKEY
ENVIRONMENTAL ENGINEER
ENVIRONMENTAL AFFAIRS

December 4, 1989

Ms. Debbie Doerner
Ohio EPA
N/W District Office
1035 Devlac Grove Dr.
Bowling Green, OH 43402-4598

Dear Ms. Doerner:

It was a pleasure meeting with you on November 27th at the former Borden Graphics facility in Whitehouse, Ohio.

My reason for requesting that meeting was twofold: First, we were anxious to let you see, firsthand, that Borden acted in an environmentally responsible manner by committing time, effort and money to the site clean-up.

Secondly, we are now interested in selling that property and are requesting, from the State, some written document which would satisfy the needs of a buyer or lending institution relative to a clean closure.

I have included, for your review, excerpts from assessments, remediation plans and remediation projects.

You will find that Borden removed ten(10) UST's from the facility in the mid eighties and found contamination in both the soil and groundwater. A bioremediation project was then undertaken which effected, I believe you will agree, a clean closure.

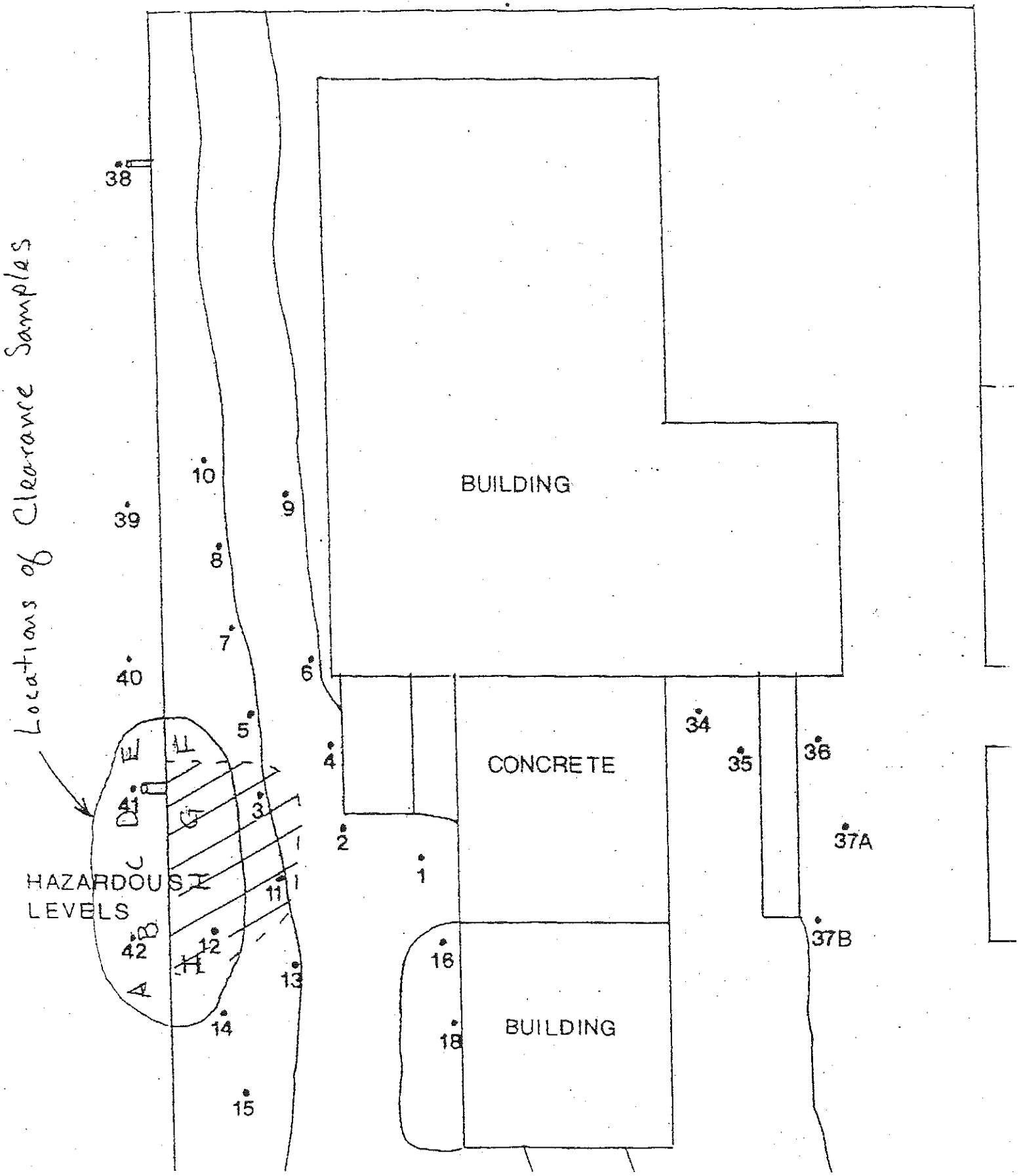
Then, in 1989, a soil removal program was initiated which included an assessment to determine horizontal and vertical delineation of the soil discoloration. This was followed by soil removal, disposal and ultimately regrading of the site to its original contour.

Please review the enclosed documents and, if you have any questions, feel free to call.

I appreciate your cooperation.

Sincerely,

G.N. Starkey


Locations of Clearance Samples
HAZARDOUS LEVELS
A
B
C
D
E
F
G
H
BUILDING
CONCRETE
BUILDING
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
34
35
36
37A
37B
38
39
40
41
42

COUSINS WASTE CONTROL CORP.
CAL REPORT# 4264

SAMPLES RECEIVED 10/06/89

LAB#	9100313	9100314	9100315	9100316	9100317
Lead, EP Tox., mg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Mercury, EP Tox., mg/l	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Selenium, EP Tox., mg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Silver, EP Tox., mg/l	0.03	0.02	0.02	0.03	0.02

Canton Analytical Labo[illegible]y, Inc.
(313) 483-7430 FAX (313) [illegible]-1541

COUSINS WASTE CONTROL CORP.
CAL REPORT# 4325

SAMPLES RECEIVED 10/11/89

LAB# 9100577 BORDEN F
LAB# 9100578 BORDEN G
LAB# 9100579 BORDEN H
LAB# 9100580 BORDEN I

LAB#	9100577	9100578	9100579	9100580	ANALYTICAL METHOD
EP TOX, EPA METALS					EPA
Arsenic, EP Tox., mg/l	< 0.50	< 0.50	< 0.50	< 0.50	EPA 7061
Barium, EP Tox., mg/l	0.31	0.61	0.14	0.18	EPA 6010
Cadmium, EP Tox., mg/l	< 0.01	0.03	< 0.01	< 0.02	EPA 6010
Chromium, Tot., EP Tox, mg/l	< 0.02	0.10	0.02	< 0.02	EPA 6010
Lead, EP Tox., mg/l	< 0.10	0.22	0.18	0.17	EPA 6010
Mercury, EP Tox., mg/l	0.07	0.04	< 0.01	0.02	EPA 7470
Selenium, EP Tox., mg/l	< 1.0	0.22	< 1.0	< 1.0	EPA 7741
Silver, EP Tox., mg/l	< 0.10	< 0.10	0.02	0.01	EPA [illegible]

Canton Analytical Laboratory, Inc.
(313) 483-7430 FAX (313) 545-1541

COUSINS WASTE CONTROL CORP.
CAL REPORT# 4264

SAMPLES RECEIVED 10/06/89

LAB# 9100313 SOIL A
LAB# 9100314 SOIL B
LAB# 9100315 SOIL C
LAB# 9100316 SOIL D
LAB# 9100317 SOIL E

LAB#	9100313	9100314	9100315	9100316	9100317
UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EPA METALS, TOTALS					
Arsenic, Total	0.62	0.67	0.63	0.42	0.51
Barium, Total	73	82	92	58	72
Cadmium, Total	2.6	2.4	2.6	2.4	2.8
Chromium, Total	17.0	21	21	19	18
Lead, Total	8.1	7.6	9.7	6.6	6.1
Mercury, Total	< 0.01	0.02	< 0.01	0.03	0.02
Selenium, Total	0.09	0.06	0.08	0.05	0.07
Silver, Total	1.0	1.4	1.2	1.3	2.1
EP TOX, EPA METALS					
Arsenic, EP Tox., mg/l	< 0.50	< 0.50	< 0.05	< 0.05	< 0.50
Barium, EP Tox., mg/l	0.19	0.17	0.19	0.25	0.18
Cadmium, EP Tox., mg/l	0.03	0.01	< 0.01	< 0.01	< 0.01
Chromium, Tot., EP Tox, mg/l	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02

Canton Analytical Labo[illegible]; Inc.
(313) 483-7430 FAX (313) [illegible]-1541

lab no. 89-11405

lot no. _____

p.o. no. 1744

Cousins Waste Control Corporation
1801 E. Matzinger Road
Toledo, OH 43612

ATTN: Gil Lazette

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden, Whitehouse, Job # 890553 - Stockpile C - Sample 5-B - 10/10/89 @ 2:00 p.m.

analysis: Extraction Procedure Toxicity Testing

procedure: A composite sample of 100.0 grams was filtered and extracted as outlined in "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods". The sample was extracted in 1600 ml of distilled water and a total of 327 ml of 0.5 N acetic acid was needed in order to maintain the specified pH of 5.0 ± 0.2. The extract was diluted with 73 additional ml of water and filtered through a 0.45 um pore size membrane filter. The filtrate was then analyzed according to the above reference.

results:

Test in the extract	Alloweble Maximum	Measured Concentration
Barium	100	1.6 mg/L
Cadmium	1.0	0.17 mg/L
Chromium	5.0	0.18 mg/L
Lead	5.0	2.3 mg/L

ANALYSIS OF STOCKPILED SOIL
TO CONFIRM NON-HAZARDOUS NATURE

...usins Waste Control Corporation
1 E. Matzinger Road
...oledo, OH 43612

ATTN: Gil Lazette

lab no. 89-11404

lot no. ———

p.o. no. 1744

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden, Whitehouse - Job # 890553 - Stockpile B - Sample 4-B - SE corner fenced area - S side - 10/10/89 @ 2:00 p.m.

analysis: Extraction Procedure Toxicity Testing

procedure: A composite sample of 100.0 grams was filtered and extracted as outlined in "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods". The sample was extracted in 1600 ml of distilled water and a total of 383 ml of 0.5 N acetic acid was needed in order to maintain the specified pH of 5.0 ± 0.2. The extract was diluted with 17 additional ml of water and filtered through a 0.45 um pore size membrane filter. The filtrate was then analyzed according to the above reference.

results:

Test	Allowable Maximum	Measured Concentration
in the extract		
Barium	100	0.84 mg/L
Cadmium	1.0	less than 0.05 mg/L
Chromium	5.0	less than 0.1 mg/L
Lead	5.0	0.24 mg/L

1801 E. Matzinger Road
Toledo, OH 43612

ATTN: Gil Lazette

p.o. no. 1744

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden, Whitehouse - Job # 890553 - Stockpile B - Sample 3-B - SE corner fenced area - N side - 10/10/89 @ 2:00 p.m.

analysis: Extraction Procedure Toxicity Testing

procedure: A composite sample of 100.0 grams was filtered and extracted as outlined in "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods". The sample was extracted in 1600 ml of distilled water and a total of 400 ml of 0.5 N acetic acid was needed in order to maintain the specified pH of 5.0 ± 0.2. The extract was diluted with 0 additional ml of water and filtered through a 0.45 um pore size membrane filter. The filtrate was then analyzed according to the above reference.

results:

Test in the extract	Allowable Maximum	Measured Concentration
Barium	100	2.0 mg/L
Cadmium	1.0	less than 0.05 mg/L
Chromium	5.0	less than 0.1 mg/L
Lead	5.0	0.71 mg/L

date completed 10/17/89 tech MS approved by

lab no. 89-11402

lot no. _____

p.o. no. 1744

Cousins Waste Control Corporation
501 E. Matzinger Road
Toledo, OH 43612

ATTN: Gil Lazette

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-6307

sample description: Borden, Whitehouse, Job # 890553 - A Stockpile - Sample 2-B - 10/10/89 @ 2:00 p.m.

analysis: Extraction Procedure Toxicity Testing

procedure: A composite sample of 100.0 grams was filtered and extracted as outlined in "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods". The sample was extracted in 1600 ml of distilled water and a total of 324 ml of 0.5 N acetic acid was needed in order to maintain the specified pH of 5.0 ± 0.2. The extract was diluted with 76 additional ml of water and filtered through a 0.45 um pore size membrane filter. The filtrate was then analyzed according to the above reference.

results:

Test in the extract	Allowable Maximum	Measured Concentration
Barium	100	2.1 mg/L
Cadmium	1.0	0.13 mg/L
Chromium	5.0	less than 0.1 mg/L
Lead	5.0	1.0 mg/L

Cousins Waste Control Corporation
1801 E. Metzinger Road
Toledo, OH 43612

ATTN: Gil Lazette

lab no. B-F1401

lot no. 1744

p.o. no

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden, Whitehouse, Job # 890553 - Stockpile Sample 1-B - SW Metal Bldg. - 10/10/89 @ 2:00 p.m.

analysis: Extraction Procedure Toxicity Testing

procedure: A composite sample of 100.0 grams was filtered and extracted as outlined in "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods". The sample was extracted in 1600 ml of distilled water and a total of 32 ml of 0.5 N acetic acid was needed in order to maintain the specified pH of 5.0 ± 0.2. The extract was diluted with 368 additional ml of water and filtered through a 0.45 um pore size membrane filter. The filtrate was then analyzed according to the above reference.

results:

Test in the extract	Allowable Maximum	Measured Concentration
Barium	100	less than 0.5 mg/L
Cadmium	1.0	less than 0.05 mg/L
Chromium	5.0	less than 0.1 mg/L
Lead	5.0	less than 0.1 mg/L

COUSINS WASTE CONTROL CORP.
1801 E. MATZINGER ROAD
TOLEDO, OH 43612
(419)726-1500

CASE HISTORY

IN-SITU BIOLOGICAL TREATMENT OF TOLUENE, XYLENE, MEK, AND HEXANES IN THE SOIL/ GROUNDWATER ENVIRONMENT

EDGAR R. MUNNINGS
COUSINS WASTE CONTROL CORP.
TOLEDO, OHIO

BACKGROUND

The site is an inactive ink manufacturing facility, which had been operational for approximately thirty years.

A portion of the soil and groundwater had been contaminated over the course of several years from a number of chemicals used in the ink manufacturing process. These chemicals had been stored in ten (10) underground storage tanks.

The storage tanks were removed in May, 1986, and four of the tanks were found to contain pittings; several had completely weathered through the wall of the tanks.

The initial approach was to determine the degree of contamination caused by the leaking underground tanks.

Samples were taken from the backfill and groundwater in the tank farm area during excavation and were found to 72 ppm Toluene ,52 ppm MEK, 680 ppm Hexanes and 86 ppm Xylene.

INVOLVEMENT

Based on the results of the laboratory analyses, using procedures as outlined in the US EPA test methods for evaluating solid waste physical/chmical methods 624/SW 846. Cousins Waste Control, Inc. recommended that the area in the immediate vicinity of the tank farm should be considered a potential pollution source and immediate steps taken to remediate this area.

Cousins Waste Control was asked to design a waste treatment system and recommend a treatment method that would biodegrade the hazardous organic compounds in the soil and groundwater environment.

When the underground tanks were removed in May, 1986, the resultant cavity was 22 feet wide, 70 feet long, with varying depths from 8 feet to 12 feet. During the following 6-8 weeks, the basin filled to within 3 1/2 feet of the surface ground level with groundwater inflow and rainwater surface run-off.

Prior to field operations, it was noted that the newly developing pond, over a two week period, was becoming actively populated with micro-organisms. Upon further observation, it was noted that a sewage discharge line from an adjacent building had been accidentally severed by the backhoe operator during excavation.

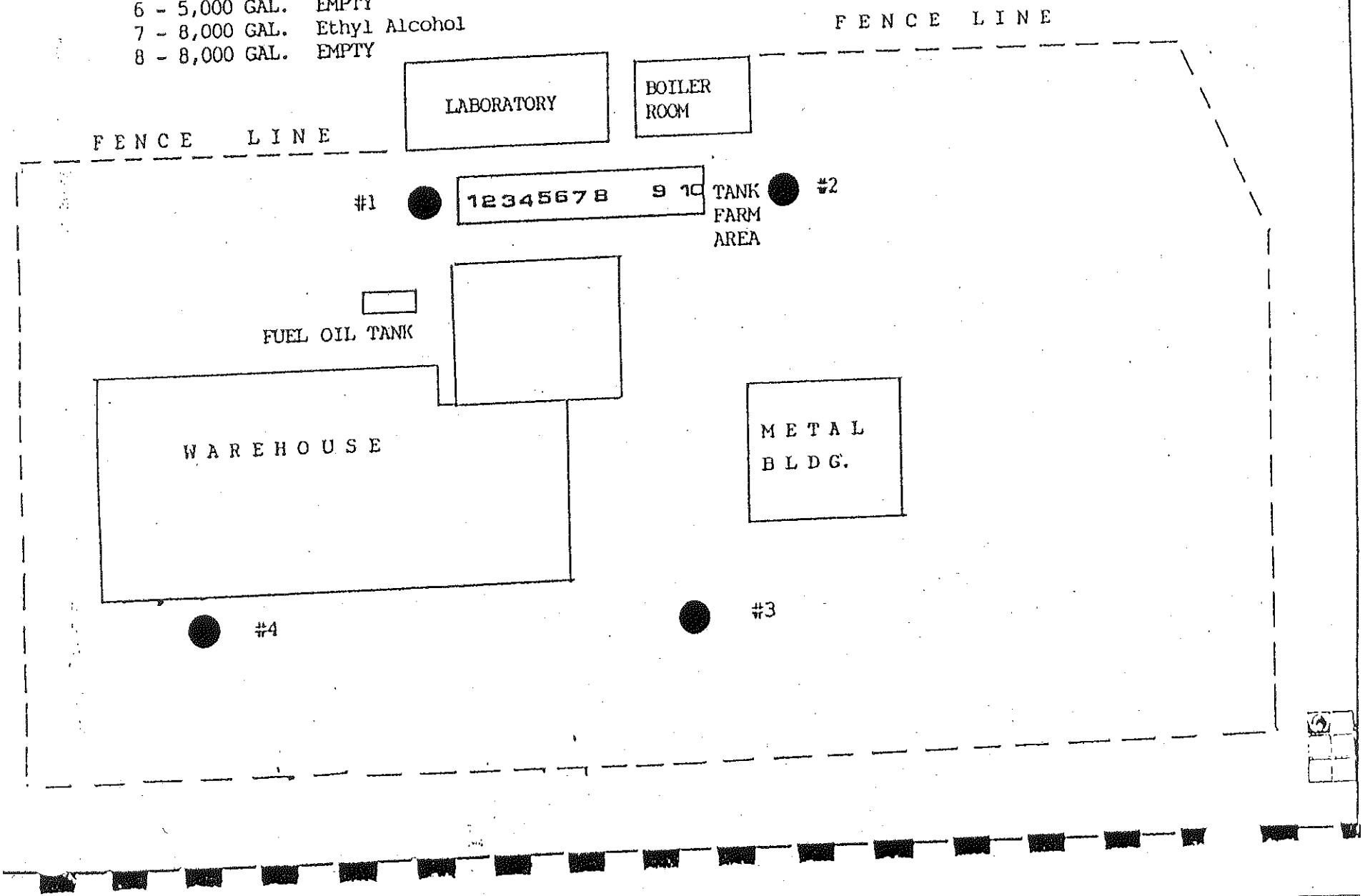
By the end of the second week, the bacterial population was becoming so concentrated that the oxygen level in the developing pond was almost depleted.

It was decided to take advantage of the existing environmental conditions with a water temperture of 69-70 degrees fahrenheit, a pH of 7.3 and an already thriving indigenius population of microbes. The pond was aerated to replenish the oxygen level and within three days was seeded with inorganic nitrogen and phosphorus, as necessary to stimulate bacterial growth.Thus, the developing pond not only became [illegible] but also the primary zone of influence as shown in figure 1-1.

BURIED TANK INFORMATION

1 - 5,000 GAL. Cellosolve
2 - 5,000 GAL. Acetone
3 - 8,000 GAL. EMPTY
4 - 8,000 GAL. Toluol
5 - 5,000 GAL. Textile Spirits
6 - 5,000 GAL. EMPTY
7 - 8,000 GAL. Ethyl Alcohol
8 - 8,000 GAL. EMPTY
9 - 8,000 GAL. Isopropal Acetate
10 - 8,000 GAL. MEK

Boring Locations



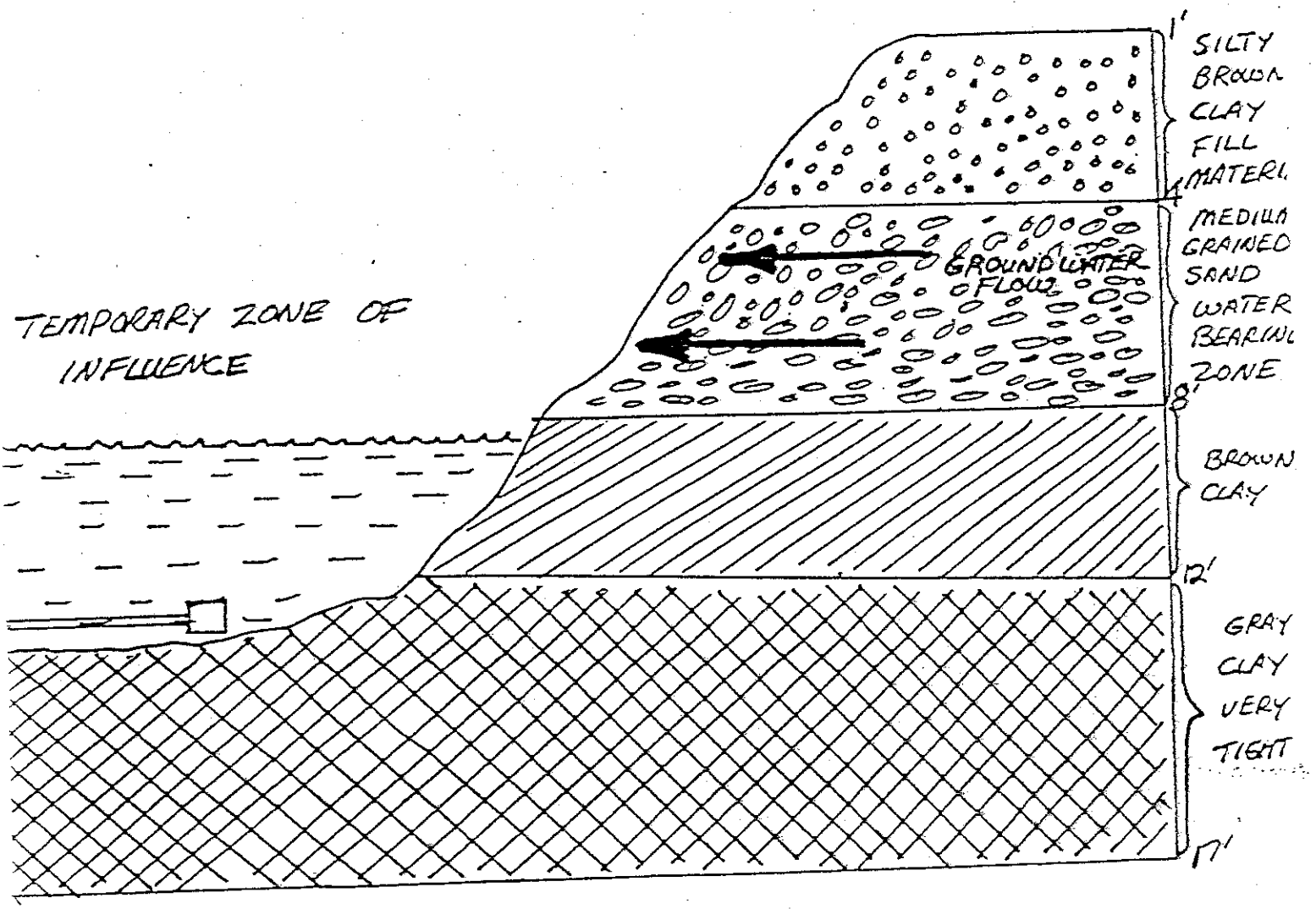


FIGURE 1-1 INDICATES WATERBEARING ZONE AND GROUNDWATER FLOW

As the groundwater seeped into the biologically active basin the moderate level of volatile organics was being degraded by the micro-organisms as indicated by the chart in figure 1-2.

Groundwater and subsurface soil samples were collected and analyzed at 30 days and again at 60 days after initial start-up of the bio-reactor and the results are shown in figures 1-2, 1-3, 1-4, and 1-5.

The laboratory results clearly indicate that the bio-reactor was effectively degrading the volatile organics in the groundwater and the subsurface soil.

The bio-system remained operational for 90 days. It was predetermined to deactivate the bio-reactor in the fall and adopt a spray basin form of air stripping.

This was accomplished by utilizing a submersable sump pump suspended from a rubber raft. The pump had the capacity to circulate 100 GPM. A schematic of the pump system used for this project is presented in figure 1-6.

The pumping grid contained 48 1-8 GPM fine mist spray nozzles spaced evenly on a completely movable, portable floating system. The purpose of this arrangement was to continue with some form of on-going treatment during the colder months.

The air stripping system remained in service as shown in figure 1-6 from September 6 to November 6, 1986. When the system was temporarily shut down and more subsurface soil samples were collected and analyzed, a two-foot subsurface core sample was taken from an 8-foot depth and segregated into two units for analyses: the top soil layer from 1-6 inches and the bottom soil layer from 18-24 inches.

The results of the analysis performed indicated less than 1 ppm of volatile organics in the soil at both levels.

The air stripping grid was removed for the winter, but the sump pump remains operational continuing to pull water from the bottom of the lagoon, discharging it into the atmosphere through a 1 1/2 inch diameter opening at a flow rate of approximately 30 GPM.

This system remained functional through the winter.

On March 9, 1987, seven core water samples were collected to test for the following parameters: City of Toledo categorical or discharge standards, and solvent scans on xylene, toluene, MEK, and hexanes.
The final laboratory tests definitely exhibited the effectiveness of this biological degradation system for removing the volatile organics in the groundwater and subsurface soil to levels of less than 1 ppm.

It was not the intention of this system to purge the volatile organics to levels for human consumption, but to bio-chemically remediate the area immediately surrounding the obsolete leaking underground tanks to a level considered acceptable for the purposes of backfilling the excavation, created by the removal of the obsolete leaking tanks, with clean fill dirt.

Furthermore, it was deemed necessary to determine, if any, the nature and degree of [illegible] of the contamination. A hydrogeological company was

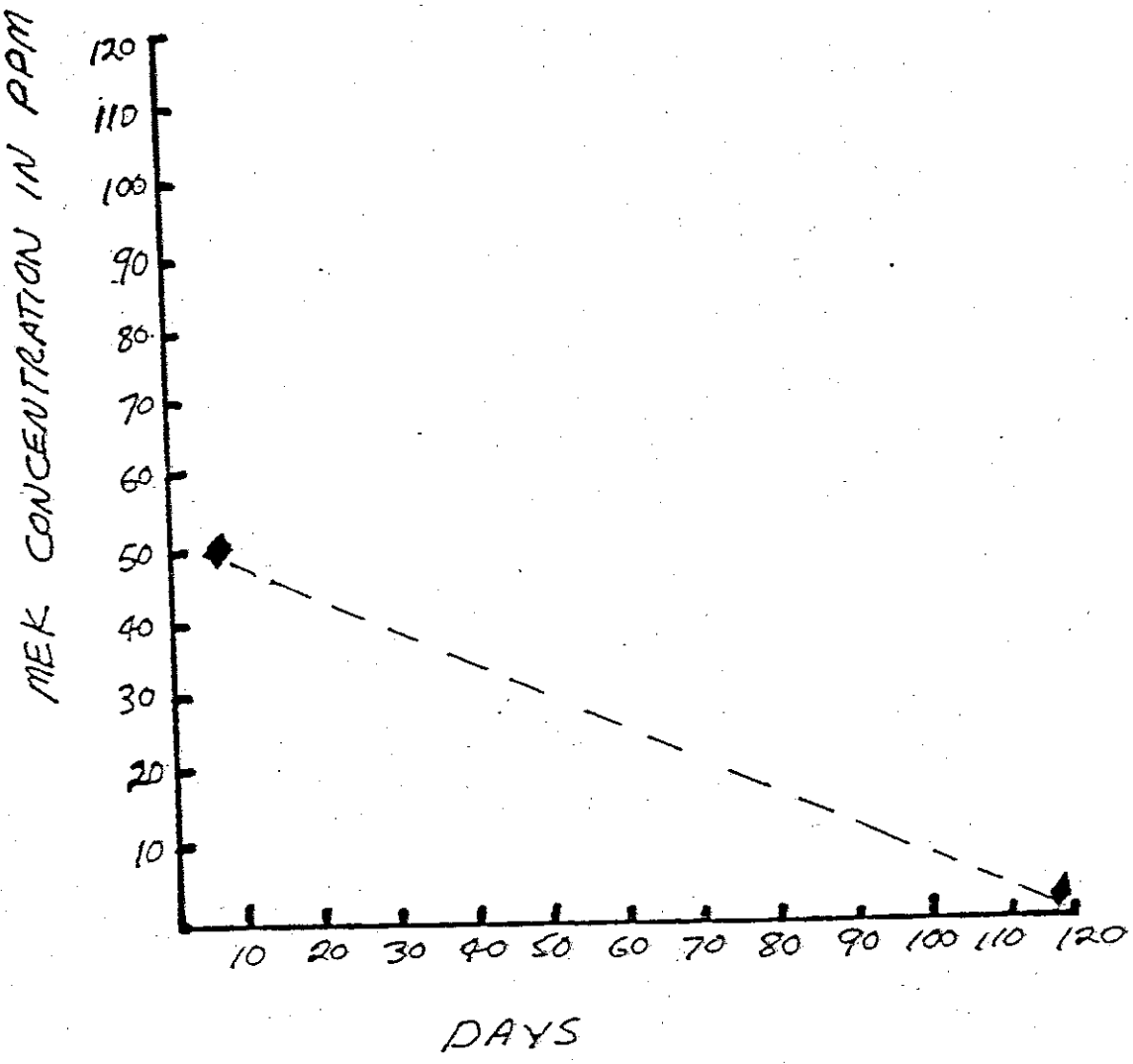

MEK CONCENTRATION IN PPM
120
110
100
90
80
70
60
50
40
30
20
10
10 20 30 40 50 60 70 80 90 100 110 120
DAYS

FIGURE 1·2

spread of volatile organics to other areas. A total of four borings were drilled on-site. Each boring was located in an area of potential contamination. Table 1.7 presents those readings taken from the vertical split spoon soil samples at various ranges.

The results of the soil sample analyses indicated very low levels of volatile organics; less than 1 ppm. The highest ranges were exhibited by borings, numbers 1 and 2, which was due primarily to the proximity of the tank farm area and also the medium grained sandy soil, which is the upper most water bearing unit, thereby readily permitting the vertical movement of contamination through this zone.

Fortunately, the very tight, thick grey clay layer acted as an excellent deterrent and boundary, preventing any downward migration of contamination.

Please note the air stripping system was installed, not as a primary method of decontamination, but strictly as a secondary procedure to continue degradation through the winter months when biological activity would be prohibited.

The biochemical and physical systems were of simple design primarily to reduce the cost of remediation and also to study the effectiveness of biodegradation utilizing the environmental site conditions to their utmost.

A more expensive and complex system would have been designed and implemented if the system that was being used had proven ineffective. For instance, if it had been imperative to reduce the contaminants to acceptable levels for human consumption, then the final stage of organic contamination could have been eliminated by using granular activated carbon adsorption to treat the groundwater.

However, the final acceptable levels of contamination rests with the proprietor.

Cousins Waste Control Corp. recommends that another subsurface core soil sample be collected from the tank farm area and analyzed before final determination is made concerning enclosing the excavation.

GT ENVIRONMENTAL LABORATORY
ANALYTICAL & CONSULTING SERVICES
Division of Oil Recovery Systems, Inc.
P. O. Box 541, Greenville, NH 03048
Tel: (603) 878-2500

Report No. 42-8431-1
VOLATILE ORGANICS ANALYSIS

Sample No.	29670	29671	29672	29673
ID	WELL 1	WELL 2	WELL 3	FIELD BLANK
Date Sampled	8/20/86	8/20/86	8/20/86	8/20/86
Date Analyzed	8/29/86	8/29/86	8/29/86	8/29/86

PARAMETER	CONCENTRATION (ug/l)				D.L.
Chloromethane	ND	ND	ND	ND	5.0
Bromomethane	ND	ND	ND	ND	1.7
Vinyl Chloride	ND	ND	ND	ND	1.8
Chloroethane	ND	ND	ND	ND	1.2
Methylene Chloride	ND	ND	ND	ND	2.2
Acetone	31	13	13	13	6.2
Carbon disulfide	ND	ND	ND	ND	4.5
Trichlorofluoromethane	ND	ND	ND	ND	1.7
1,1-Dichloroethene	ND	ND	ND	ND	1.1
1,1-Dichloroethane	ND	ND	ND	ND	4.5
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.6
Chloroform	ND	ND	ND	ND	1.6
1,2-Dichloroethane	ND	ND	ND	ND	1.6
2-Butanone	ND	ND	ND	ND	15.0
1,1,1-Trichloroethane	ND	ND	ND	ND	2.6
Carbon tetrachloride	ND	ND	ND	ND	2.1
Vinyl acetate	ND	ND	ND	ND	3.6
Bromodichloromethane	ND	ND	ND	ND	2.1
1,2-Dichloropropane	ND	ND	ND	ND	2.8
cis-1,2-Dichloropropene	ND	ND	ND	ND	5.0
Trichloroethene	BDL	ND	13	ND	1.9
Benzene	4.2	ND	ND	ND	1.7
Dibromochloromethane	ND	ND	ND	ND	3.1
trans-1,3-Dichloropropene	ND	ND	ND	ND	2.4
1,1,2-Trichloroethane	ND	ND	ND	ND	1.9
Ethylene Dibromide	ND	ND	ND	ND	7.3
2-Chloroethylvinylether	ND	ND	ND	ND	2.7
Bromoform	ND	ND	ND	ND	5.7
4-Methy-2-Pentanone	18	ND	ND	ND	7.3
2-Hexanone	ND	ND	ND	ND	9.2
Tetrachloroethene	ND	ND	64	ND	2.2
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	6.0
Toluene	330	ND	ND	ND	2.1
Chlorobenzene	ND	ND	ND	ND	3.0
Ethylbenzene	6.1	ND	ND	ND	4.5
M-xylene	15	ND	ND	ND	4.0
O & P xylene	12	ND	ND	ND	4.0
M-Dichlorobenzene	ND	ND	ND	ND	6.5
O&P-Dichlorobenzene	ND	ND	ND	9.7	7.1
	36	23	17	BDL	10.0

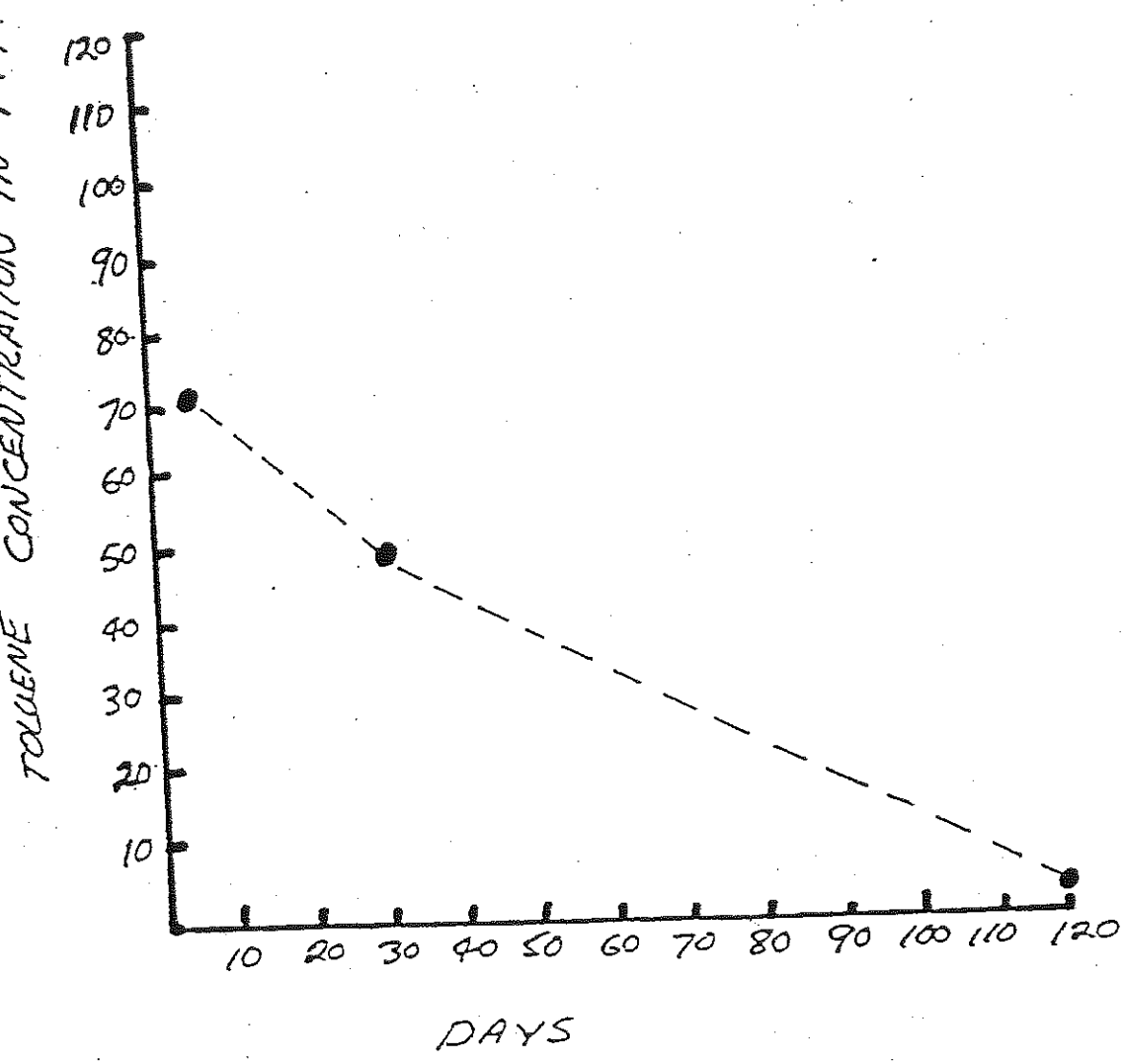

TOLUENE CONCENTRATION IN PPM
120
110
100
90
80
70
60
50
40
30
20
10
10 20 30 40 50 60 70 80 90 100 110 120
DAYS

FIGURE 1·3

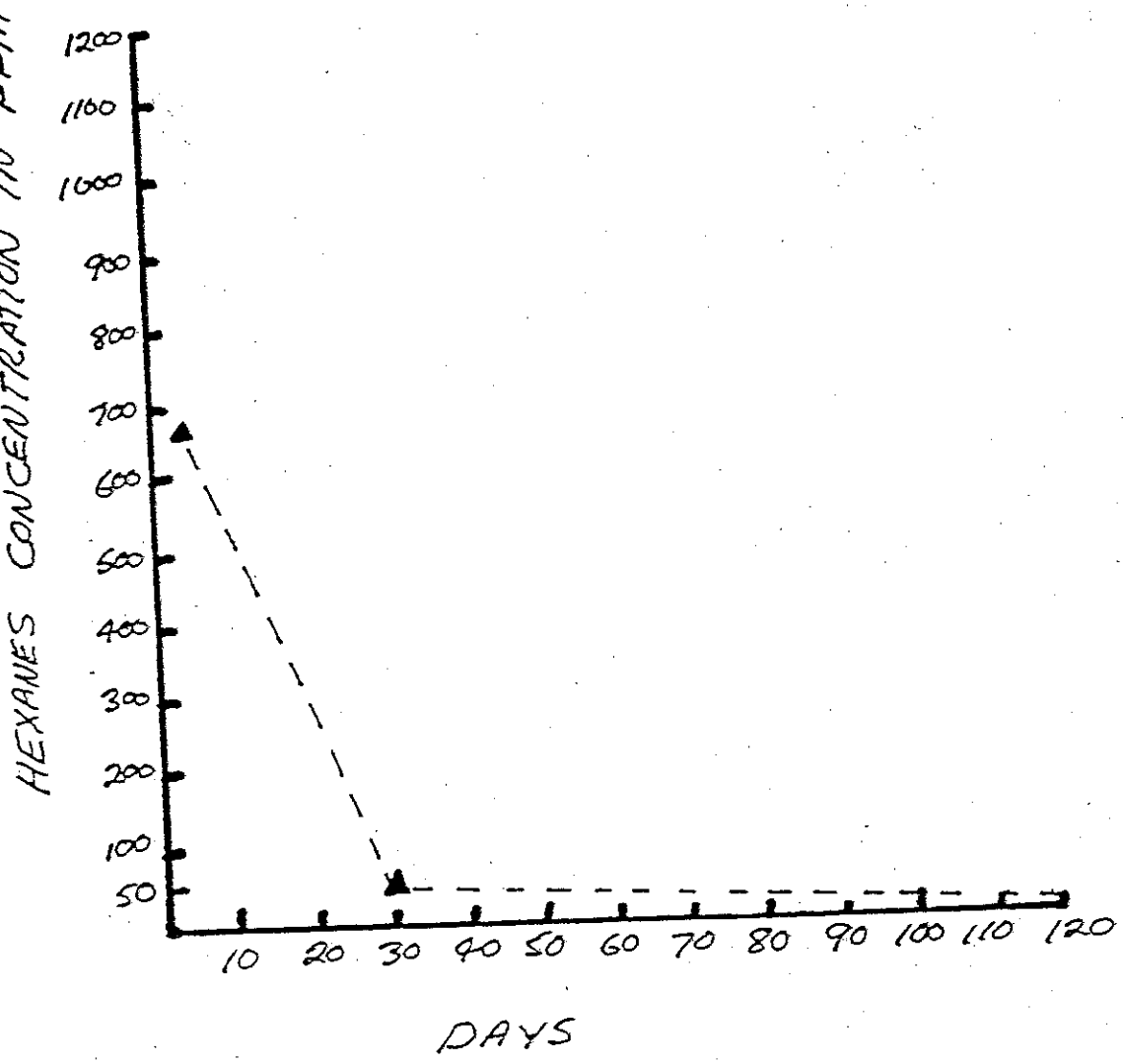

HEXANES CONCENTRATION IN PPM
1200
1100
1000
900
800
700
600
500
400
300
200
100
50
10
20
30
40
50
60
70
80
90
100
110
120
DAYS

FIGURE 1-4

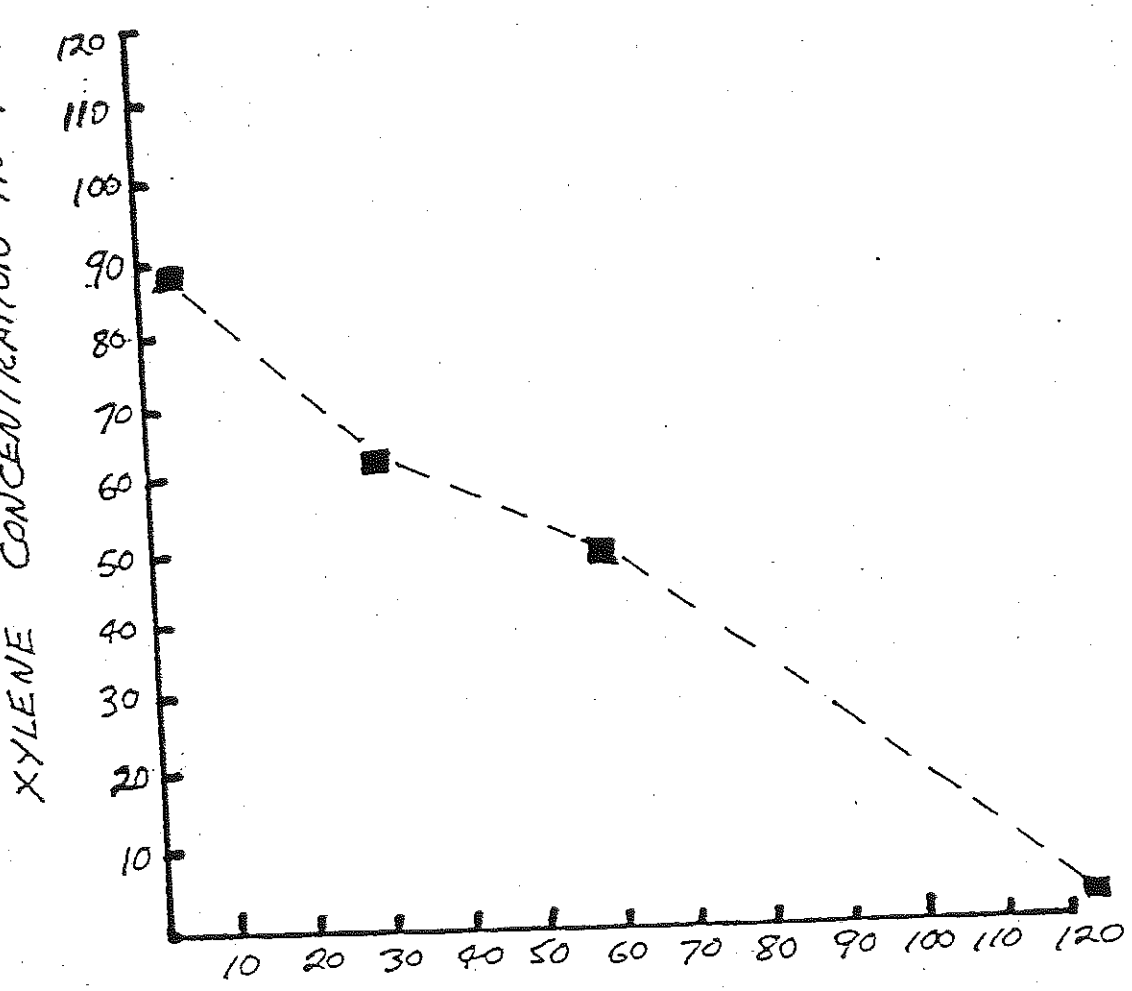
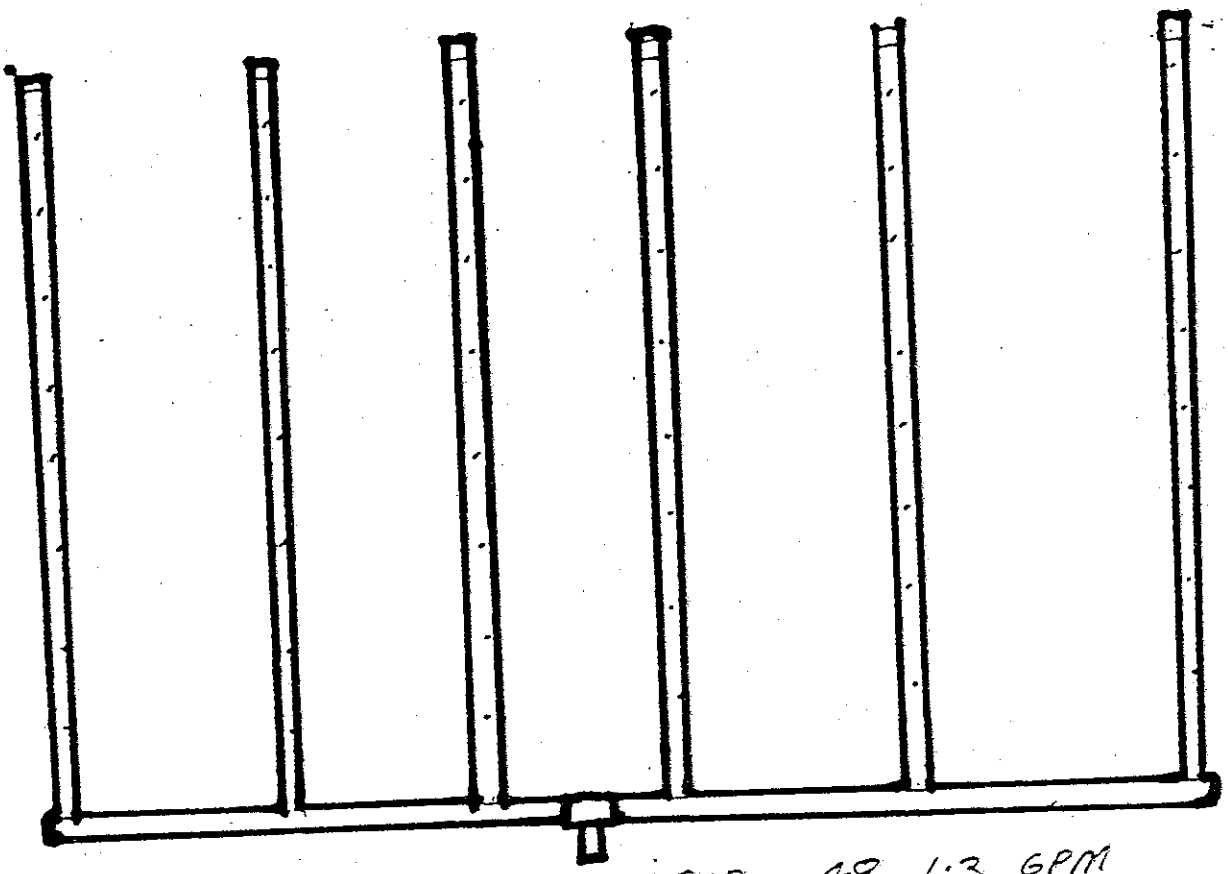
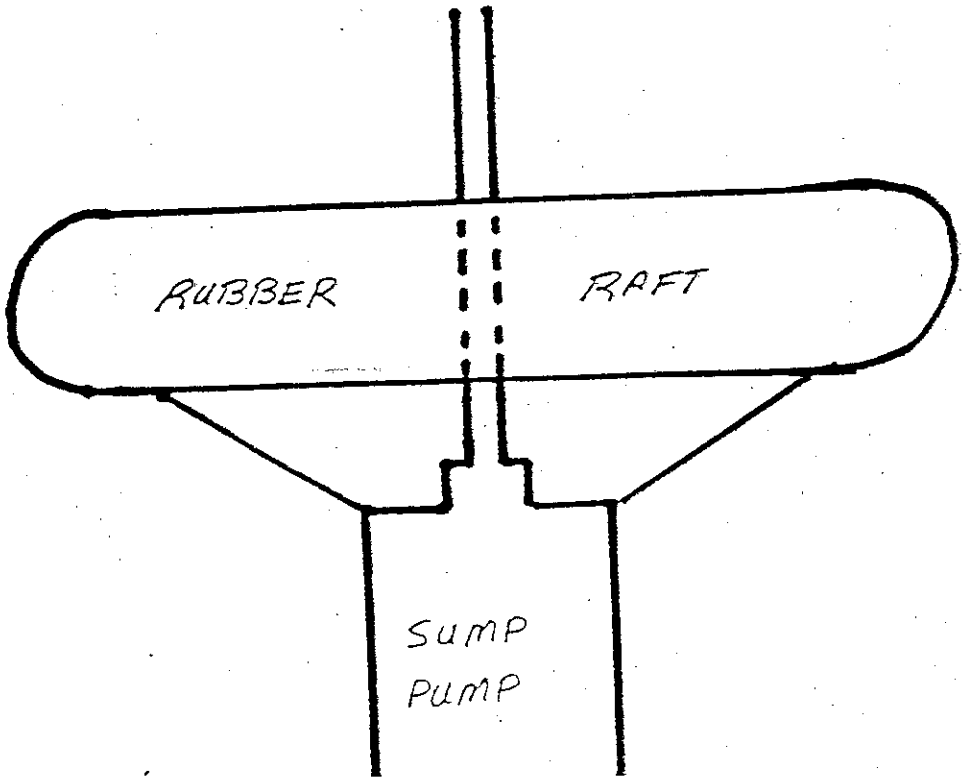

XYLENE CONCENTRATION IN PPM
120
110
100
90
80
70
60
50
40
30
20
10
10 20 30 40 50 60 70 80 90 100 110 120
DAYS

FIGURE 1.5



AIR STRIPPING GRID 48 1·3 GPM

FIGURE 1·7



GROUNDWATER TECHNOLOGY

Drilling Log

Project: Borden Chemical Owner:

Location: Whitehouse, Ohio W.O. Number: 42-8431

Well Number: #4 Total Depth: 17' Diameter: 4"

Surface Elevation: Water Level: Initial: 24-hrs.:

Screen: Dia.: Length: Slot Size:

Casing: Dia.: Length: Type:

Drilling Company: TEC Drilling Method: Hollow stem

Driller: Log By: L. Perisse Date Drilled: 8-20-86

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Interval From	Interval To	Description/Soil Classification (Color, Texture, Structures)
0			0	13'	Fill material. Gravel and soil. This
1					location suspected to be in backfill and
2					foundation material.
3					
4					Split spoon sample from 3½'-5'
5					Split spoon sample from 8½-10'
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

GROUNDWATER TECHNOLOGY

Drilling Lo

Project: Borden Chemical Owner:
Location: Whitehouse, Ohio W.O. Number: 42-8431
Well Number: #3 Total Depth: 17' Diameter: 4"
Surface Elevation: Water Level: Initial: 24-hrs.
Screen: Dia.: Length: Slot Size:
Casing: Dia.: Length: Type:
Drilling Company: TEC Drilling Method: hollowstem
Driller: Log By: L. Perisse Date Drilled: 8-20-86

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Interval From	Interval To	Description/Soil Classification (Color, Texture, Structures)
0			0	4'	Soil fill material
1					
2					
3					
4			4'	12'	Split spoon sample from 3½'-5'
5					brown clay with rock fragments. Appears to
6					have been disturbed.
7					
8					Split spoon sample from 8½'-10'
9					
10					
11					
12			12'	17'	Grey clay. Tight. Does not ribbon.
13					Split spoon sample from 13½'-15'
14					
15					
16					
17					

GROUNDWATER TECHNOLOGY

Drilling Log

Project: Borden Chemical — Owner:

Location: Whitehouse, Ohio — W.O. Number: 42-8431

Well Number: #2 — Total Depth: 17' — Diameter: 4"

Surface Elevation: — Water Level: Initial: — 24-hrs.:

Screen: Dia.: — Length: — Slot Size:

Casing: Dia.: — Length: — Type:

Drilling Company: TEC — Drilling Method: Hollow stem

Driller: — Log By: L. Perisse — Date Drilled: 8-20-86

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Interval From	Interval To	Description/Soil Classification (Color, Texture, Structures)
0			0	3½'	Soil fill material. Very black in color.
1					Indistinguishable odor.
2					
3			3½'	12'	Split spoon sample from 3½'-5'
4					Very thin sand lens at 3½'.
5					Brown clay with small rock fragments. Some silt.
6					Split spoon sampleat 8½-10'
7					
8					
9					
10					
11					
12			12'	17'	Grey clay. Tight. Does not ribbon
13					
14					Split spoon sample from 13½'-15'
15					
16					
17					

GROUNDWATER TECHNOLOGY

Drilling Log

Project: Borden Chemical Owner:

Location: Whitehouse, Ohio W.O. Number: 42-8431

Well Number: #1 Total Depth: 17' Diameter: 4"

Surface Elevation: Water Level: Initial: 24-hrs.:

Screen: Dia.: Length: Slot Size:

Casing: Dia.: Length: Type:

Drilling Company: TBC Drilling Method: Hollow stem

Driller: Log By: L. Perisse Date Drilled: 8-20-86

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Interval From	Interval To	Description/Soil Classification (Color, Texture, Structures)
0			0	3'	Soil fill material . Rock fragments
1					
2					
3			3'	4'	Medium crained sand. Grey in color. Damp
4			4'	12'	Split spoon sample from 3½'-5'.
5					Brown silty clay. Some small rock fragments.
6					
7					Split spoon sample from 8½'-10'
8					
9					
10					
11					
12			12'	17'	Grey clay. Some silt. Very tight. Does not
13					ribbon well.
14					
15					Split spoon sample from 13½'-15'
16					
17					

GROUNDWATER
TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS
P. O. Box 416, Elyria, OH 44035 (216) 949-7217

APPENDIX I

To develop an on site system design specifically for Borden Chemical and to construct the in situ water treatment system, Groundwater Technology, Inc. submits this price quote of

This price includes labor and hardware for construction of the system. When the construction is complete, Groundwater Technology ,Inc. will train Borden personnel (if requested) to maintain the operation furnishing Borden with a turnkey operation.

GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS
P. O. Box 416, Elyria, OH 44035 (216) 949-7217

Background

Groundwater Technology was requested by Borden Chemical to conduct an environmental investigation at a Borden ink manufacturing facility located in Whitehouse, Ohio.

This manufacturing facility is not currently operating, although during its operating years, a number of chemicals were used for the ink manufacturing process. These chemicals were stored in 10 buried underground storage tanks, and their locations can be found on Figure 1.

These tanks were removed by Borden Chemical in the early summer months of 1986. Four of the ten tanks were found to contain pittings, some weathered completely through the tank.

The purpose of this investigation was to determine if contamination from the tank farm area was present on site and to what extent.

On Site Investigation

Groundwater Technology arrived on the Borden site on August 20, 1986. The purpose of this visit was to conduct investigative borings, collect soil samples, and to collect water samples from the boring locations.

GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS
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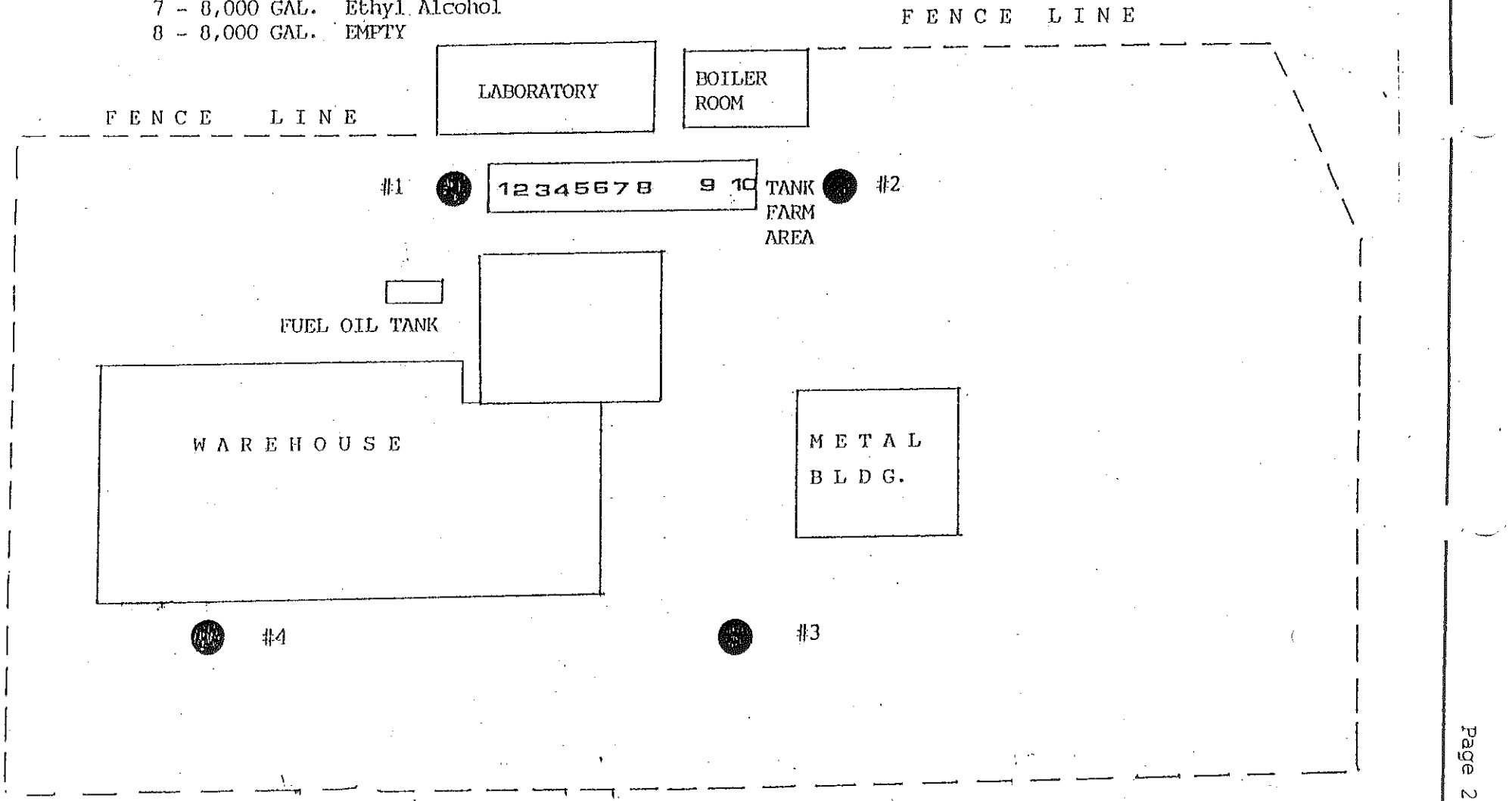
TABLE OF CONTENTS

BURIED TANK INFORMATION

1 - 5,000 GAL. Cellosolve
2 - 5,000 GAL. Acetone
3 - 8,000 GAL. EMPTY
4 - 8,000 GAL. Toluol
5 - 5,000 GAL. Textile Spirits
6 - 5,000 GAL. EMPTY
7 - 8,000 GAL. Ethyl Alcohol
8 - 8,000 GAL. EMPTY
9 - 8,000 GAL. Isopropal Acetate
10 - 8,000 GAL. MEK

Boring Locations



Photographs of the site have been included and can be found on the photo layout page (page 4).

A total of 4 borings were drilled on site. Each boring was located and logged by a professional geologist. The well log descriptions can be found as Appendix I. Their locations can be found on Figure I. Each boring was drilled to a total depth of 17'.

The borings were left to stand open for a period of time (approximately three hours) to faciliate the collection of groundwater in the boring for sampling. This was possible due to the silty clay makeup of the surficial geologic materials. For the purpose of preserving the integrity of the open boring, groundwater from the boring was hand bailed to evacuate three well volumes of water from the hole prior to sampling. Water samples were then collected from each boring for subsequent analysis by the 624 E.P.A. priority pollutant method. The results can be found as Appendix II.

Split spoon samples were also collected at varying depths for the purpose of volatile organic compound screening by an explosimeter and H-Nu photoionizer. Table I lists the readings for each sample. A discussion of the readings presented on Table I can be found in the report section labeled RESULTS.

After the borings were sampled, they were filled with the boring cuttings and capped with a bentonite and cement seal to protect against vertical contamination from the surface.

Geology

This site is characterized by approximately 3' of fill material underlain by a silty brown clay containing small rock fragments. At the interface between the fill and clay materials exists a thin lens (approximately 4') of medium grained sand. This lens serves as the uppermost water bearing zone (although it does not serve as a major water producing zone). Underlying the brown clay is a very tight grey clay layer. No drilling penetrated this grey clay layer.

Hydrogeology

None of the borings were surveyed due to their short longevity, thus the groundwater flow direction was not determined.

As previously mentioned, the sand lens found at approximately 3'-4' serves as the upper most water bearing unit. This sand lens is discontinuous in areas due to excavations for building purposes. For this reason, no water was accumulated in well #4.

The clays underlain by this sand unit serve as partial vertical deterrents or boundaries to the continuing downward migration of contamination. Horizontal contamination is most easily spread through the shallow sand lens via typical groundwater hydraulic properties.

TABLE I

Boring #	Sampling Range (in feet)	Explosimeter Reading (% L.E.L.)	H-Nu Reading (in ppm)
1	3 1/2' - 5'	7 %	9
1	8 1/2` - 10'	0%	0
1	13 1/2' - 15'	0%	0
2	3 1/2` - 5`	2%	3
2	8 1/2` - 10'	0%	0
2	13 1/2` - 15'	0%	0
3	3 1/2' - 5'	0%	0
3	8 1/2' - 10'	0%	0
3	13 1/2` - 15'	0%	0
4	3 1/2' - 5'	0%	0
4	8 1/2' - 10'	0%	0
Tank pit water sample		10%	30

Results

Table I presents those readings taken from the soil samples collected as a result of split spoon sampling. Samples have been collected from vertical sampling ranges in each boring. These samples were transported from the sampling spoon to a glass sampling jar and set aside for subsequent screening. The samples sat for a period of no longer than 24 hours prior to screening. The purpose of this sampling is to allow for volatilization to occur in the head space of the jar. This head space is sampled utilizing the explosimeter and H-Nu photoionizer.

The soil sample analysis reveals very low ranges in the parts per million units of volatile organics. Samples collected from borings #1 and #2 exhibited the greatest contamination readings at the 3 1/2 ' - 5' interval. This is not surprising due to the fact that the sand lens unit has been intercepted in this sampling interval. No contamination was noted below a depth of 10'. It is important to note that the explosimeter and H-Nu instruments are used as general screening devices and are by no means meant to replace soils analysis which are conducted in the laboratory.

An additional result found on this table is from a water sample which has been collected from the standing water in the backfill of the tank farm area. The lower explosive limit was found to be 10% and the H-Nu reading was recorded at 30 ppm.

Samples taken by Borden from this site prior to Groundwater Technology's involvement with the project, from both soils and water, have revealed varying degress of contamination within the tank farm backfill itself. The results of the two separate samplings cannot be direclty compared although the tank farm backfill area and the standing waters in this area exhibit a moderate degree of contamination.

The results of the 624 analysis exhibit values which are predominantly non-detectable for all of the samples. The value of specific notice is that of toluene in boring #1, the boring closest to the tank farm area. A value of 330 ppb was recorded. Generally, the outlying areas exhibit minimal contamination at the present water table conditions.

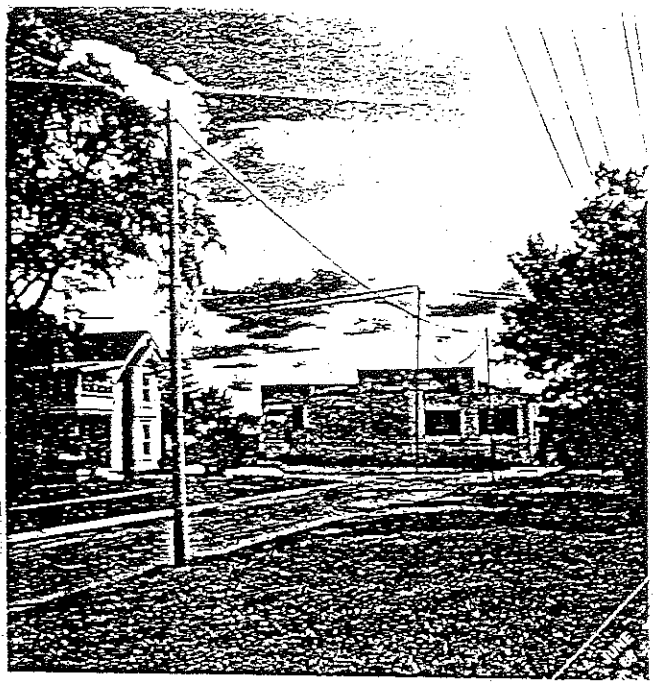
RECOMMENDATIONS

Based on the discussion in the results section, Groundwater Technology, Inc. recommends that the area in the immediate vicinity of the tank farm be addressed as a potential pollution source. As a potential source, the tank farm area should be remediated in the immediate future.

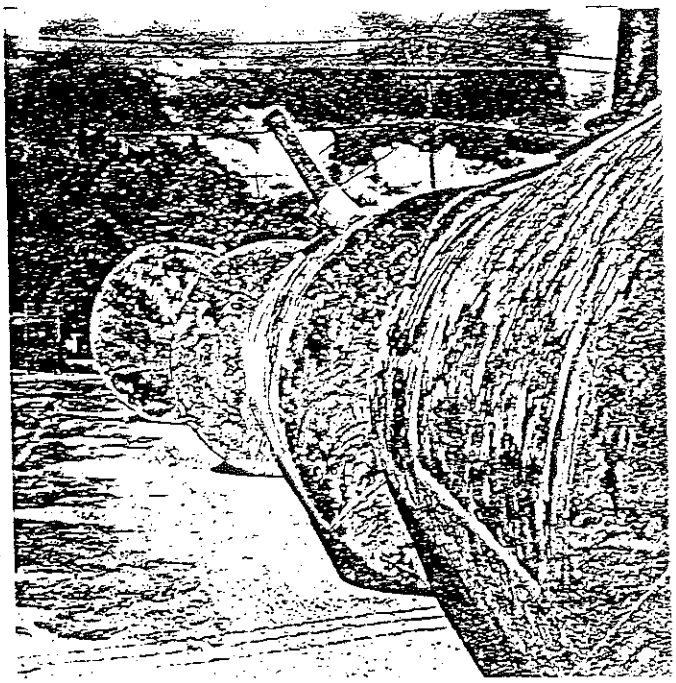
The tank farm area, having retained a significant amount of rainwater (approximately 40,000 to 60,000 gallons) has the potential for continuing accumulated contamination via leaching from the backfill material in the tank farm area.

To remove the potential for further contamination of outlying areas from the tank farm area via subsurface migration, Groundwater Technology Inc. recommends in situ degradation of the water and surrounding backfill materials. This in situ degradation would be achieved via a below grade closed loop air stripping system. Aeration would occur in this below grade system constructed for this purpose to achieve a 70% to 85% removal rate of the volatile organic compounds. A circulation system would be constructed to allow numerous passthroughs in the system. Subsequent to this process, the tank pit can be filled and capped.

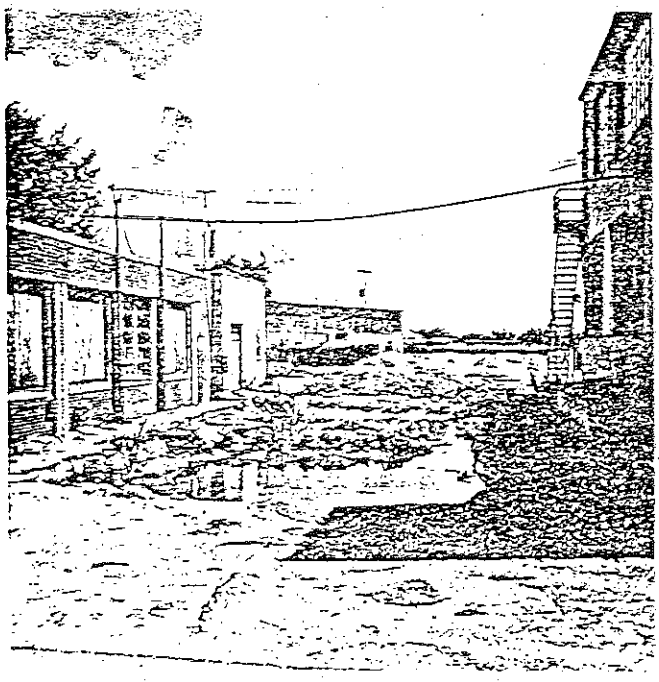
GROUNDWATER
TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS
P. O. Box 416, Elyria, OH 44035 (216) 949-7217



Borden facility
Whitehouse, Ohio



Pulled Storage Tanks



Standing water in tank farm

GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS
P. O. Box 416, Elyria, OH 44035 (216) 949-7217

An Assessment report for a
Borden facility located in
Whitehouse, Ohio

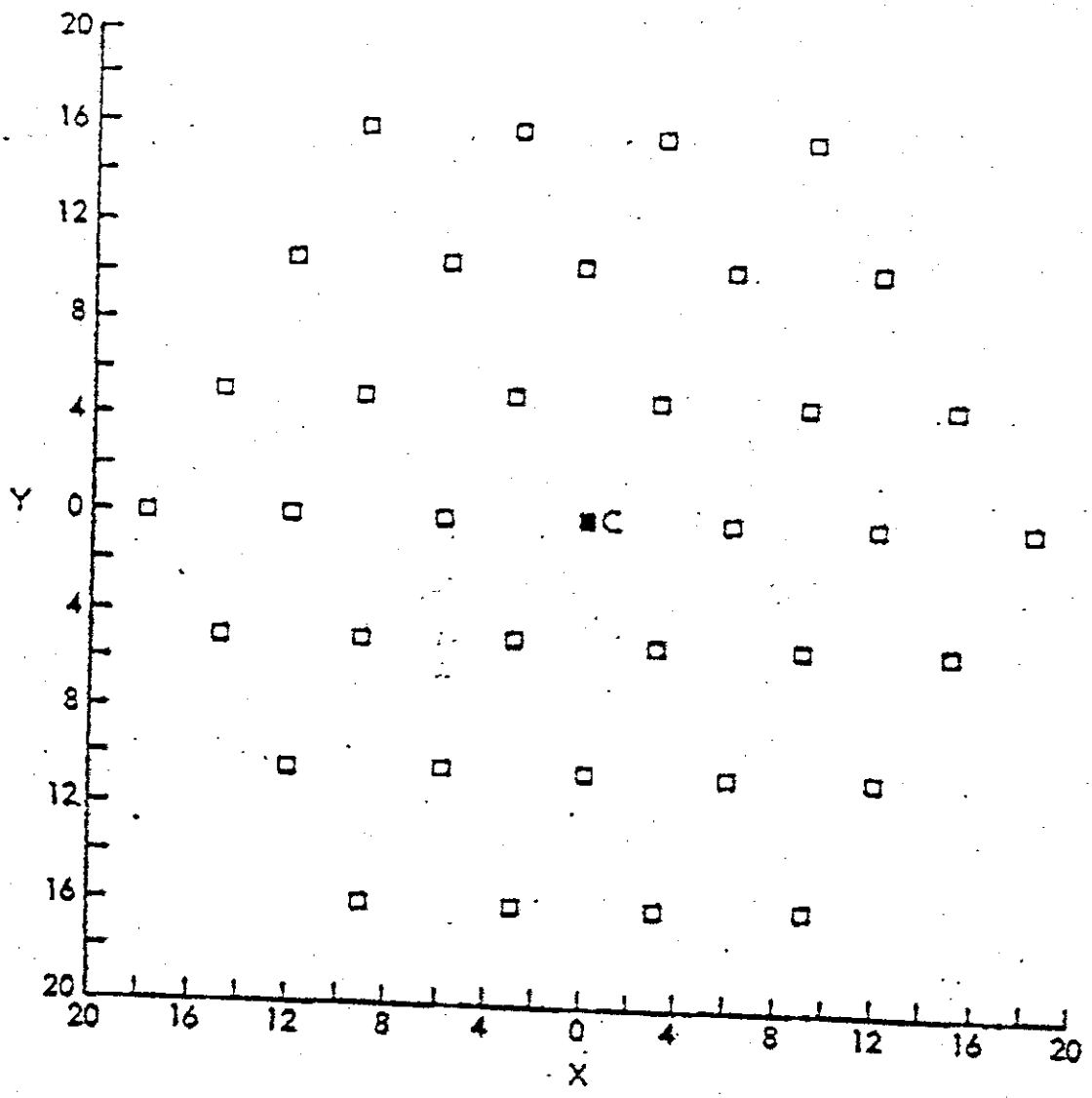
Prepared For:

Borden Chemical
165 North washington Avenue
Columbus, Ohio 43125

Prepared By:

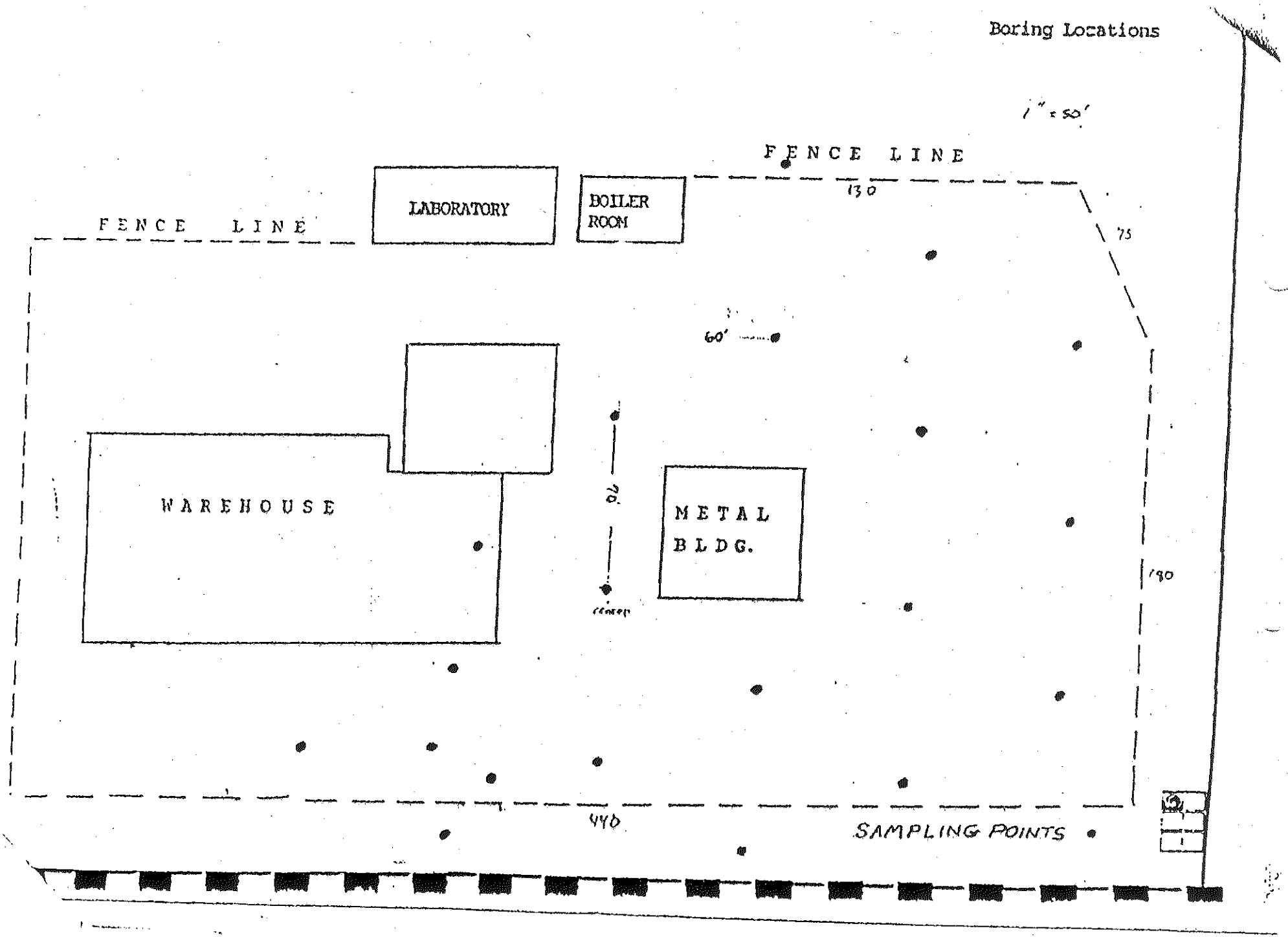
Laura L. Perisse
Hydrogeologist
District Manager

Michael Brenoel
Hydrogeologist



The outer boundary of the contaminated area is assumed to be 20 feet from the center (C) of the spill site.

Figure 8. Location of sampling points in a 37-point grid.


Boring Locations
1" = 50'
FENCE LINE
LABORATORY
BOILER ROOM
FENCE LINE
130
75
60'
WAREHOUSE
20'
METAL BLDG.
180
440
SAMPLING POINTS

COUSINS WASTE CONTROL CORP.
1801 MATZINGER ROAD
TOLEDO, OHIO 43612
PHONE (419) 726-1500
1-800-433-6754

April 25, 1989

Mr. Gary Tong
Borden Inc.
165 N. Washington
Columbus, Ohio 43215

Dear Mr. Tong:

In accordance with our telephone conversation, I am sending this proposal regarding the site assessment to be performed at the former Borden Ink. Plant, in Whitehouse, Ohio.

The purpose of this site assessment is to determine both the vertical and horizontal extent of soil contamination from various ink pigments containing heavy metals. The soil investigation will be conducted on an exploratory basis. The cost for the borings will be per foot, this includes collecting samples for analysis. The laboratory analysis for RCRA EP toxicity heavy metals concentrations will be per test. The cost for specialist (geologist) on-site would be

Estimated total cost for exploratory site assessment would be excluding laboratory analysis. Preparation of the final report detailing the condition of the site, based on analytical results, would be

If this quote is acceptable, please sign the acknowledgement at the bottom and return it to my attention. I have enclosed a self-addressrd stamped envelope for your convenience.

I appreciate the opportunity to be of service to you. If you have any further question, please do not hesitate to contact me.

Date:_____ Accepted by:_____

Sincerely,

COUSINS WASTE CONTROL CORPORATION

Ron Munnings

RM-cf

Co.
1801 E. Matzinger
Toledo, OH 43612

ATTN: R. Munnings

lab no. 87-1881

lot no. _____

p.o. no. _____

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden Chem.

procedure: The % organic solvents were determined by gas chromatography after extracting a representative portion of sample in carbon disulfide.

results:

MEK	less than 1 ppm
Toluene	less than 1 ppm
Xylenes	less than 1 ppm
Methanol	less than 1 ppm
Hexanes	less than 1 ppm

lab no. 87-1881

lot no. _____

p.o. no. _____

Cousins
1801 E. Matzinger
Toledo, OH 43612

ATTN: R. Munnings

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

REVISED REPORT

sample description: Bordon Chem.

procedure: The sample was analyzed by procedures outlined in US EPA "Test Methods for Evaluating Solid Waste Physical/Chemical Methods" SW-846 July 1982, 2nd Edition.

results:

Arsenic	less than 0.01 mg/L
Cadmium	less than 0.05 mg/L
Chromium	less than 0.1 mg/L
Copper	less than 0.05 mg/L
Iron	0.21 mg/L
Lead	less than 0.1 mg/L
Mercury	less than 0.01 mg/L
Nickel	0.09 mg/L
Silver	less than 0.05 mg/L
Zinc	less than 0.05 mg/L
BOD_5	45 mg/L
Conductivity as umhos/cm	560
Cyanide	less than 0.1 mg/L
COD	99 mg/L
Oil and Grease	6 mg/L
pH in S.U.	7.59
Phenols as C_6H_5OH	less than 0.1 mg/L
Phosphorus as P	0.2 mg/L
Total Solids	300 mg/L
Total Suspended Solids	18 mg/L
TOC	35 mg/L
TOX	26 ug/L

This report was revised to correct the units reported for the TOX parameter. The remainder of the results are unaffected.

ENVIRONMENTAL QUALITY LABORATORIES, INC.

6107 East Ten Mile Road
Warren, Michigan 48091
(313) 757-7970

COUSINS WASTE CONTROL
1801 E. MATZINGER RD.
TOLEDO OHIO 43612

DATE REPORTED 11/17/86

LAB NO. 1066

DESCRIPTION AND SAMPLE NUMBER ----BORDEN CHEMICAL SOIL SAMPLE TAKEN 10 FT BELOW GROUND LEVEL OBSOLETE UNDERGROUND TANK
SAMPLE MATRIX ---SOIL IN GLASS QUART BOTTLE--

DATE RECEIVED 11/6/86

REPORT OF ANALYSIS

Extraction Procedure - Leacheate (all results in ppm or mg/l)	Standards (ppm or mg/l)	Method SW-846B
Arsenic	5.0	7061
Barium	100.0	7080
Cadmium	1.0	7130
Chrome, Total	5.0	7190
Chrome, Hex.	N/A	7197
Copper	100.0	7210
Cyanides, Total	20.0	9010
Lead	5.0	7420
Mercury	0.2	7470
Silver	5.0	7760
Selenium	1.0	7741
Zinc	500.0	7950
Endrin	0.02	8080
Lindane	0.4	8080
Methoxychlor	10.0	8080
Toxaphene	0.5	8080
2,4-D	10.0	8150
2,4,5 T.P. (Silvex)	1.0	8150
Sulfides	N/A	9030
P.C.B.'S	50.0	8080
Ignitability (oF)	Below 140oF Sec.2.1.1	
Reactivity-material does not react with water, acid, base.	No violent chemical No explosion or toxic fumes. No D003 2.1.3	
Corrosivity (pH)	f.t. or = to 2 or g.t. or = 13.	2.1.2.

Material is:

Parameter	Method
Ash (%)	Std. Mtd.302 H
Asbestos	NIOSH-7400
B.T.U./lb.	ASTM D-240
Carbon, Tot., Org.	EPA-9060
Chlorine (%)	D-808
T.O.X. (ppm)	EPA-9020
Solids (%)	EPA 160.2
Sulfur, Total (%)	ASTM D-129
Visc. (Kin/Saybl@ oF	ASTM D-88
Volatile Matter (%)	EPA 160.4
Halogenated Volatiles	EPA-8010

Non Halogenated Volatiles EPA-8015
METHYL ETHYL KETONE--LESS THAN 0.1 PPM
TOLUENE ----------LESS THAN 0.1 PPM
XYLENES----------LESS THAN 1.0 PPM
METHANOL----------56.2 PPM
HEXANES---------- 7.8 PPM

Phenols EPA-8040

Polynuclear Aromatics EPA-8100

REFERENCES: STANDARD METHODS FOR EXAMINATION OF WATER, E.P.A. 600-4/79-020, A.S.T.M., N.I.O.S.H. MANUAL, P.C.B. E.P.A. SW, 846-B, ALL CURRENT EDITIONS.

LABORATORY DIRECTOR

Thomas S. Megna

THOMAS S. MEGNA, M.S.

ENVIRONMENTAL QUALITY LABORATORIES, INC.

6107 East Ten Mile Road
Warren, Michigan 48091
(313) 757-7970

COUSINS WASTE CONTROL
1801 E. MAIZINGER RD.
TOLEDO OHIO 43612

DATE REPORTED 11/17/86

LAB NO. 1066

DESCRIPTION AND SAMPLE NUMBER ----BORDEN CHEMICAL SOIL SAMPLE TAKEN 10 FT BELOW GROUND LEVEL OBSOLETE UNDERGROUND TANK
SAMPLE MATTRIX ---SOIL IN GALLON CAN-----

DATE RECEIVED 11/6/86

REPORT OF ANALYSIS

Extraction Procedure - Leacheate (all results in ppm or mg/l)	Standards (ppm or mg/l)	Method SW-846B
Arsenic	5.0	7061
Barium	100.0	7080
Cadmium	1.0	7130
Chrome, Total	5.0	7190
Chrome, Hex.	N/A	7197
Copper	100.0	7210
Cyanides, Total	20.0	9010
Lead	5.0	7420
Mercury	0.2	7470
Silver	5.0	7760
Selenium	1.0	7741
Zinc	500.0	7950
Endrin	0.02	8080
Lindane	0.4	8080
Methoxychlor	10.0	8080
Toxaphene	0.5	8080
2,4-D	10.0	8150
2,4,5 T.P. (Silvex)	1.0	8150
Sulfides	N/A	9030
P.C.B.'S	50.0	8080
Ignitability (oF)	Below 140oF Sec.2.1.1	
Reactivity-material does not react with water, acid, base.	No violent chemical No explosion or toxic fumes. No D003 2.1.3	
Corrosivity (pH)	1.t. or = to 2 or g.t. or = 13.	2.1.2.

Material is:

Parameter	Method
Ash (%)	Std. Mtd.302 N
Asbestos	NIOSH-7400
B.T.U./lb.	ASTM D-240
Carbon, Tot., Org.	EPA-9060
Chlorine (%)	D-808
T.O.X. (ppm)	EPA-9020
Solids (%)	EPA 160.2
Sulfur, Total (%)	ASTM D-129
Visc. (Kin/Say)@ oF	ASTM D-88
Volatile Matter (%)	EPA 160.4
Halogenated Volatiles	EPA-8010

Non Halogenated Volatiles EPA-8015
METHYL ETHYL KETONE--LESS THAN 0.1 PPM
TOLUENE ----------LESS THAN 0.1 PPM
XYLENES----------LESS THAN 1.0 PPM
METHANOL---------- 8.3 PPM
HEXANES----------10.9 PPM

Phenols EPA-8040

Polynuclear Aromatics EPA-8100

REFERENCES: STANDARD METHODS FOR EXAMINATION OF WATER, E.P.A. 600-4/79-020, A.S.T.M., N.I.O.S.H. MANUAL, P.C.B. E.P.A. SW, 846-B, ALL CURRENT EDITIONS.

LABORATORY DIRECTOR

Thomas J Negra

(ns
1[illegible] E. Matzinger
Toledo, OH 43612

Attn: B. Cousins

lab no. 86-4757

lot no. _____

p.o. no. _____

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden Chemical - obsolete underground tank - core soil sample

procedure: The % organic solvents were determined by gas chromatography after extracting a representative portion of sample in carbon disulfide.

results:

MEK	less than 50 ppm
Toluene	less than 50 ppm
Xylenes	less than 50 ppm
Hexanes	less than 50 ppm

DF Huffman

lab no. 86-4047

lot no. _____

p.o. no. _____

Cousins
1801 E. Matzinger
Toledo, OH 43612

ATTN: B. Cousins

biological & environmental control laboratories, inc.
615 front street toledo, ohio 43605 phone (419) 693-5307

sample description: Borden Chemical - Underground Tanks

analysis: MEK, Xylenes, Toluene, Hexanes

procedure: The sample was extracted with carbon disulfide and the organic solvent concentrations were determined by gas chromatography.

results:

MEK	less than 50 ppm
Xylenes	62 ppm
Toluene	less than 50 ppm
Hexanes	less than 50 ppm

GROUNDWATER
TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS
P. O. Box 416, Elyria, OH 44035 (216) 949-7217

APPENDIX II

GT ENVIRONMENTAL LABORATORY

ANALYTICAL & CONSULTING SERVICES
Division of Oil Recovery Systems, Inc.
P. O. Box 541, Greenville, NH 03048
Tel: (603) 878-2500

Laboratory Test Results

9/4/86
Report No. 42-8431-1
Submitted to: Laura Perisse
Groundwater Technology
5147 Edgewater Drive
Sheffield Lake, Ohio 44054

Sample Identification:
The attached report covers water samples #29670-29673 taken by L. Perisse using 40 ml septum-capped glass vials at site #42-8431, ~~Westinghouse~~ WHITEHOUSE, Ohio and acidified to pH 2.

Method:
Analysis was performed for volatile organics by purge and trap gas chromatography with a mass spectrometer detector as per EPA Method 624. Detection limits are listed on the report. Samples diluted in order to maintain the calibrated range are so indicated by a footnote giving the factor by which the MDL is raised.

Sampling and sample handling and preservation are specified by this laboratory to be as per EPA Method 624.

Results:
Results are reported in ppb (ug/l).

Prepared by:

Dave Reese
GC/MS Manager
DRR/jb

GT ENVIRONMENTAL LABORATORY

ANALYTICAL & CONSULTING SERVICES
Division of Oil Recovery Systems, Inc.
P. O. Box 541, Greenville, NH 03048
Tel: (603) 878-2500

Report No. 42-8431-1
VOLATILE ORGANICS ANALYSIS

Sample No.	29670	29671	29672	29673	
ID	WELL 1	WELL 2	WELL 3	FIELD BLANK	
Date Sampled	8/20/86	8/20/86	8/20/86	8/20/86	
Date Analyzed	8/29/86	8/29/86	8/29/86	8/29/86	
PARAMETER	CONCENTRATION (ug/l)				D.L.
Chloromethane	ND	ND	ND	ND	5.0
Bromomethane	ND	ND	ND	ND	1.7
Vinyl Chloride	ND	ND	ND	ND	1.8
Chloroethane	ND	ND	ND	ND	1.2
Methylene Chloride	ND	ND	ND	ND	2.2
Acetone	31	13	13	13	6.2
Carbon disulfide	ND	ND	ND	ND	4.5
Trichlorofluoromethane	ND	ND	ND	ND	1.7
1,1-Dichloroethene	ND	ND	ND	ND	1.1
1,1-Dichloroethane	ND	ND	ND	ND	4.5
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.6
Chloroform	ND	ND	ND	ND	1.6
1,2-Dichloroethane	ND	ND	ND	ND	1.6
2-Butanone	ND	ND	ND	ND	15.0
1,1,1-Trichloroethane	ND	ND	ND	ND	2.6
Carbon tetrachloride	ND	ND	ND	ND	2.1
Vinyl acetate	ND	ND	ND	ND	3.6
Bromodichloromethane	ND	ND	ND	ND	2.1
1,2-Dichloropropane	ND	ND	ND	ND	2.8
cis-1,2-Dichloropropene	ND	ND	ND	ND	5.0
Trichloroethene	BDL	ND	13	ND	1.9
Benzene	4.2	ND	ND	ND	1.7
Dibromochloromethane	ND	ND	ND	ND	3.1
trans-1,3-Dichloropropene	ND	ND	ND	ND	2.4
1,1,2-Trichloroethane	ND	ND	ND	ND	1.9
Ethylene Dibromide	ND	ND	ND	ND	7.3
2-Chloroethylvinylether	ND	ND	ND	ND	2.7
Bromoform	ND	ND	ND	ND	5.7
4-Methy-2-Pentanone	18	ND	ND	ND	7.3
2-Hexanone	ND	ND	ND	ND	9.2
Tetrachloroethene	ND	ND	64	ND	2.2
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	6.0
Toluene	330	ND	ND	ND	2.1
Chlorobenzene	ND	ND	ND	ND	3.0
Ethylbenzene	6.1	ND	ND	ND	4.5
O-Xylene	15	ND	ND	ND	4.0
M & P xylene	12	ND	ND	ND	4.0
1,2-Dichlorobenzene	ND	ND	ND	ND	6.5
1,3-&1,4-Dichlorobenzene	ND	ND	ND	9.7	7.1
Methanol	36	23	17	BDL	20.0

GT ENVIRONMENTAL LABORATORY

ANALYTICAL & CONSULTING SERVICES
Division of Oil Recovery Systems, Inc.
P. O. Box 541, Greenville, NH 03048
Tel: (603) 878-2500

NOTES:
ND = NOT DETECTED
BDL = BELOW DETECTION LIMIT
D.L. = DETECTION LIMIT

OhioEPA
State of Ohio Environmental Protection Agency
vest District Office
lac Grove Drive
Bow...g Green, Ohio 43402-4598
(419) 352-8461

Toward A Cleaner Environment
15 Year Anniversary 1972 - 1987

Complaint #256

Richard F. Celeste
Governor

RE: Borden Chemical
ID # OHD005043740
Hazardous Waste
Lucas County

July 8, 1988

Mr. Joseph Standley
Borden Realty, Inc.
180 E.Broad St.
Columbus, OH 43215

Dear Mr. Standley:

The Ohio Enivornmentgal Protection Agency's Northwest District Office has completed an investigation into the past hazardous waste disposal practices at the former Borden Chemical Company located in Whitehouse Ohio. This investigation was conducted in response to several public complaints from local citizens. Several drums of an unknown material remained on the site after the plant's closing in 1985.

During recent visits to the property we discovered that part of the building was/is being leased to the Clapp & Hanney Company. Employees of that company allowed representatives of this office to enter the site in order to sample the drums. Approximately 12 drums were labled and photographed by our Agency. Several of these drums were sampled and analyized for various hazardous wastes and hazardous constituents. Additionally, a sample of discolored soil was taken from just east of a rear loading dock. A review of past records indicates that this area was formally used to store Borden's hazardous wastes prior to off site disposal.

The analytical results of our sampling indicates that the contents of the various drums are not a hazardous waste. However, the soil sample was found to contain 110 ppm of E.P. Toxic lead. Any concentration of lead in amounts greater than 5 ppm is considered to be a hazardous waste.

Although the area of soil contamination appears to be small, our Agency has concerns that the area be properly cleaned up. We therefore request that Borden conduct an investigation into the rate and extent of the contamination. Once this is done, you would be required to remove all contaminated soil for off site disposal at a licensed hazardous waste facility.

We understand that there may be several potential buyers of this property. Local officials have indicated that they would welcome a new business at this site. You should be aware however, that under federal and state statute, remedial activities at this site are not only the responsability of any future property owners but continue with Borden.

We will await a response to your proposed actions within the next 30 days. If you should have any questions in this matter, please feel free to contact this office at (419)352-8461.

Yours truly,

Jeffery A. Steers, R.S.
Division of Solid & Hazardous Waste Mgt.

cc: Diane McGilvery, Mayor, Village of Whitehouse
Mark Weber, Supt. Village Services, Village of Whitehouse

WADSWORTH/ALERT
LABORATORIES, INC.

156

QUALITY CONTROL SECTION

1938-1988
50 YEARS
WADSWORTH/ALERT
LABORATORIES, INC.
Sampling, testing, mobile labs
4101 Shuffel Drive N.W. / North Canton, Ohio 44720

ANALYTICAL REPORT

CONTROL NO. W880311-1

Borden Chemical

Presented to :

SUE BUCHANAN

OHIO EPA-DSHWM

WADSWORTH/ALERT LABORATORIES, INC.

Bob Peters

Bob Peters
Project Manager

Marvin W. Stephens

Marvin W. Stephens, Ph. D.
Vice President & Corporate Technical Director

April 19, 1988

CORPORATE AND LABORATORY: North Canton, Ohio (216) 497-9396
LABORATORY: Cleveland, Ohio (216) 642-9151
LABORATORY: Bartow, Florida (813) 533-2150
SOUTHEAST REGIONAL OFFICE: Lexington, South Carolina (803) 957-6590
24-HOUR ALERT LINE: (216) 497-9338

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55781
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88

SAMPLE ID : BCO1 MATERIAL IN DRUM

Leachate testing in accordance with USEPA Manual SW846 Method 1310

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT	
Silver	3/29- 3/31/88	0.1	0.01	mg/l
Arsenic	3/23- 3/30/88	ND	0.005	mg/l
Barium	3/28- 4/ 6/88	3.2	0.01	mg/l
Cadmium	3/28- 3/31/88	ND	0.01	mg/l
Chromium	3/28- 3/31/88	0.04	0.02	mg/l
Mercury	3/23- 3/28/88	ND	0.005	mg/l
Lead	3/28- 3/29/88	ND	0.05	mg/l
Selenium	3/23- 3/28/88	ND	0.005	mg/l
Final pH	3/23/88	4.9		su
Initial pH	3/23- 3/24/88	7.7		su

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METHOD 8240 VOLATILE COMPOUNDS ANALYTICAL REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55782
SAMPLE MATRIX : LIQUID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/23/88
ANALYSIS DATE : 3/25/88

SAMPLE ID : BCO2 DRUMMED LIQUID (UNKNOWN)

	RESULT (mg/kg)	DETECTION LIMIT
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	10
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5
Chloromethane	ND	10
Dibromochloromethane	ND	5
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,1-Dichloroethane	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
Methylene chloride	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Trichlorofluoromethane	ND	5
Vinyl chloride	ND	10

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

OTHER COMPOUNDS PRESENT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55782
SAMPLE MATRIX : LIQUID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/23/88
ANALYSIS DATE : 3/25/88

SAMPLE ID : BCO2 DRUMMED LIQUID (UNKNOWN)

Non-listed Quantified Compounds

Xylenes	6	mg/kg

MS/DS Identified Non-regulated Compounds With Their Estimated Concentrations

Propyl benzene	5	mg/kg
Ethylmethyl benzene	25	mg/kg
1-Propene,3,3-thiobis[2-methyl-	200	mg/kg

WADSWORTH/ALERT
LABORATORIES, INC.

METHOD 8270 SEMI-VOLATILE ANALYTICAL REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55782
SAMPLE MATRIX : LIQUID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : BCO2 DRUMMED LIQUID (UNKNOWN)

	RESULT (mg/kg)	DETECTION LIMIT
Acenaphthene	ND	1,000
Acenaphthylene	ND	1,000
Anthracene	ND	1,000
Benzidine	ND	5,000
Benzo(a)anthracene	ND	1,000
Benzo(b)fluoranthene	ND	1,000
Benzo(k)fluoranthene	ND	1,000
Benzo(ghi)perylene	ND	1,000
Benzo(a)pyrene	ND	1,000
Bis(2-chloroethoxy)methane	ND	1,000
Bis(2-chloroethyl)ether	ND	1,000
Bis(2-chloroisopropyl)ether	ND	1,000
Bis(2-ethylhexyl)phthalate	ND	1,000
4-Bromophenyl phenyl ether	ND	1,000
Butyl benzyl phthalate	ND	1,000
2-Chloronaphthalene	ND	1,000
4-Chlorophenyl phenyl ether	ND	1,000
Chrysene	ND	1,000
Dibenzo(a,h)anthracene	ND	1,000
Di-n-butyl phthalate	ND	1,000
1,2-Dichlorobenzene	ND	1,000
1,3-Dichlorobenzene	ND	1,000
1,4-Dichlorobenzene	ND	1,000
3,3'-Dichlorobenzidine	ND	5,000
Diethyl phthalate	ND	1,000
Dimethyl phthalate	ND	1,000
2,4-Dinitrotoluene	ND	1,000
2,6-Dinitrotoluene	ND	1,000
Di-n-octyl phthalate	ND	1,000
Fluoranthene	ND	1,000
Fluorene	ND	1,000
Hexachlorobenzene	ND	1,000
Hexachlorobutadiene	ND	1,000
Hexachlorocyclopentadiene	ND	1,000
Hexachloroethane	ND	1,000
Indeno(1,2,3-CD)pyrene	ND	1,000
Isophorone	ND	1,000
Naphthalene	ND	1,000
Nitrobenzene	ND	1,000
N-Nitrosodimethylamine	ND	1,000
N-Nitrosodiphenylamine	ND	1,000
N-Nitrosodi-n-propylamine	ND	1,000
Phenanthrene	ND	1,000
Pyrene	ND	1,000
1,2,4,Trichlorobenzene	ND	1,000

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METHOD 8270 ACID ANALYTICAL REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55782
SAMPLE MATRIX : LIQUID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : BCO2 DRUMMED LIQUID (UNKNOWN)

	RESULT (mg/kg)	DETECTION LIMIT
4-Chloro-3-methylphenol	ND	1000
2-Chlorophenol	ND	1000
2,4-Dichlorophenol	ND	1000
2,4-Dimethylphenol	ND	1000
2,4-Dinitrophenol	ND	5000
2-Methyl-4,6-dinitrophenol	ND	5000
2-Nitrophenol	ND	1000
4-Nitrophenol	ND	5000
Pentachlorophenol	ND	5000
Phenol	ND	1000
2,4,6-Trichlorophenol	ND	1000

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

OTHER COMPOUNDS PRESENT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55782
SAMPLE MATRIX : LIQUID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : BCO2 DRUMMED LIQUID (UNKNOWN)

Non-listed Quantified Compounds

None

MS/DS Identified Non-regulated Compounds With Their Estimated Concentrations

1-Propene,3,3-thiobis[2-methyl-	500	mg/kg
Unknown	1,000	mg/kg
Unknown	400	mg/kg

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55783
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88

SAMPLE ID : BC03

Leachate testing in accordance with USEPA Manual SW846 Method 1310

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT	
Silver	3/28- 3/31/88	ND	0.01	mg/l
Arsenic	3/23- 3/30/88	ND	0.005	mg/l
Barium	3/28- 4/ 6/88	0.46	0.01	mg/l
Cadmium	3/28- 3/31/88	0.08	0.01	mg/l
Chromium	3/28- 3/31/88	0.17	0.02	mg/l
Mercury	3/23- 3/28/88	ND	0.005	mg/l
Lead	3/23- 3/29/88	110	1	mg/l
Selenium	3/23- 3/29/88	ND	0.005	mg/l
Final pH	3/23- 3/24/88	5.1		su
Initial pH	3/23/88	8.4		su

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METHOD 8240 VOLATILE COMPOUNDS ANALYTICAL REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55784
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/23/88
ANALYSIS DATE : 3/29/88

SAMPLE ID : BC04 SPILLED MATERIAL

	RESULT (mg/kg)	DETECTION LIMIT
Benzene	ND	60
Bromodichloromethane	ND	60
Bromoform	ND	60
Bromomethane	ND	120
Carbon tetrachloride	ND	60
Chlorobenzene	ND	60
Chloroethane	ND	120
2-Chloroethylvinyl ether	ND	120
Chloroform	ND	60
Chloromethane	ND	120
Dibromochloromethane	ND	60
1,2-Dichlorobenzene	ND	60
1,3-Dichlorobenzene	ND	60
1,4-Dichlorobenzene	ND	60
1,1-Dichloroethane	ND	60
1,2-Dichloroethane	ND	60
1,1-Dichloroethene	ND	60
trans-1,2-Dichloroethene	ND	60
1,2-Dichloropropane	ND	60
cis-1,3-Dichloropropene	ND	60
trans-1,3-Dichloropropene	ND	60
Ethylbenzene	ND	60
Methylene chloride	ND	60
1,1,2,2-Tetrachloroethane	ND	60
Tetrachloroethene	ND	60
Toluene	ND	60
1,1,1-Trichloroethane	ND	60
1,1,2-Trichloroethane	ND	60
Trichloroethene	ND	60
Trichlorofluoromethane	ND	60
Vinyl chloride	ND	120

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

OTHER COMPOUNDS PRESENT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55784
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/23/88
ANALYSIS DATE : 3/29/88

SAMPLE ID : BCO4 SPILLED MATERIAL

Non-listed Quantified Compounds

Styrene	160 mg/kg

MS/DS Identified Non-regulated Compounds With Their Estimated Concentrations

None

WADSWORTH/ALERT
LABORATORIES, INC.

METHOD 8270 SEMI-VOLATILE ANALYTICAL REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55784
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : BC04 SPILLED MATERIAL

	RESULT (mg/kg)	DETECTION LIMIT
Acenaphthene	ND	49
Acenaphthylene	ND	49
Anthracene	ND	49
Benzidine	ND	250
Benzo(a)anthracene	ND	49
Benzo(b)fluoranthene	ND	49
Benzo(k)fluoranthene	ND	49
Benzo(ghi)perylene	ND	49
Benzo(a)pyrene	ND	49
Bis(2-chloroethoxy)methane	ND	49
Bis(2-chloroethyl)ether	ND	49
Bis(2-chloroisopropyl)ether	ND	49
Bis(2-ethylhexyl)phthalate	33 J	49
4-Bromophenyl phenyl ether	ND	49
Butyl benzyl phthalate	ND	49
2-Chloronaphthalene	ND	49
4-Chlorophenyl phenyl ether	ND	49
Chrysene	ND	49
Dibenzo(a,h)anthracene	ND	49
Di-n-butyl phthalate	ND	49
1,2-Dichlorobenzene	ND	49
1,3-Dichlorobenzene	ND	49
1,4-Dichlorobenzene	ND	49
3,3'-Dichlorobenzidine	ND	250
Diethyl phthalate	ND	49
Dimethyl phthalate	ND	49
2,4-Dinitrotoluene	ND	49
2,6-Dinitrotoluene	ND	49
Di-n-octyl phthalate	ND	49
Fluoranthene	ND	49
Fluorene	ND	49
Hexachlorobenzene	ND	49
Hexachlorobutadiene	ND	49
Hexachlorocyclopentadiene	ND	49
Hexachloroethane	ND	49
Indeno(1,2,3-CD)pyrene	ND	49
Isophorone	ND	49
Naphthalene	ND	49
Nitrobenzene	ND	49
N-Nitrosodimethylamine	ND	49
N-Nitrosodiphenylamine	ND	49
N-Nitrosodi-n-propylamine	ND	49
Phenanthrene	ND	49
Pyrene	ND	49
1,2,4,Trichlorobenzene	ND	49

ND - NONE DETECTED
J - ESTIMATED CONCENTRATION BELOW MINIMUM DETECTABLE LIMIT

WADSWORTH/ALERT
LABORATORIES, INC.

METHOD 8270 ACID ANALYTICAL REPORT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55784
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : BCO4 SPILLED MATERIAL

	RESULT (mg/kg)	DETECTION LIMIT
4-Chloro-3-methylphenol	ND	49
2-Chlorophenol	ND	49
2,4-Dichlorophenol	ND	49
2,4-Dimethylphenol	ND	49
2,4-Dinitrophenol	ND	250
2-Methyl-4,6-dinitrophenol	ND	250
2-Nitrophenol	ND	49
4-Nitrophenol	ND	250
Pentachlorophenol	ND	250
Phenol	ND	49
2,4,6-Trichlorophenol	ND	49

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

OTHER COMPOUNDS PRESENT

COMPANY : OHIO EPA-DSHWM
LABORATORY ID : 5152-55784
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : BCO4 SPILLED MATERIAL

Non-listed Quantified Compounds

2-Methylnaphthalene	5 J	mg/kg

J - ESTIMATED CONCENTRATION BELOW MINIMUM
DETECTABLE LIMIT.

MS/DS Identified Non-regulated Compounds With Their Estimated Concentrations

Benzene (1-methylethenyl)-	100	mg/kg
Ethanol,2-(2-ethoxyethoxy)	1,000	mg/kg
Unknown cyclic hydrocarbon	100	mg/kg
Unknown substituted benzene	200	mg/kg
Benzene,1,1-(1,2-cyclobutanediyl) bis,trans	200	mg/kg
Unknown	300	mg/kg
Unknown cyclic hydrocarbon	200	mg/kg
Unknown	100	mg/kg
Unknown	400	mg/kg
Unknown	100	mg/kg

WADSWORTH/ALERT LABS

P. O. BOX
CANTON, [illegible] 4701
(216) 454-8304

CHAIN-OF—CUSTODY RECORD

W 880311-1

No. 1425

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUMBER
Borden Chemical Property	Ohio EPA DSHWM	(614) 481-7239	

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1 2 3 4 5 6 7
1	BC01	One 500ml Glass	Material in Drum for EP Toxic metals analysis	
2	BC02	One 250ml Glass	Drummed Liquid (Unknown) 8240 & 8250 Parameters	
3	BC03	One 500 ml Glass	Soil for EP Toxic metals Analysis	
4	BC04	One 250 ml Glass	Spilled Material for 8240 & 8250 Parameters	

Person Responsible for sample	Affiliation	Date	Time
Rich Dreschel	OEPA, NWDO	3/11	11:00

Purpose of analysis (use back of front sheet if necessary)

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1,2,3,4	[signature]	Sealed for Shipment	3/16	14:00
2		RECEIVED OHIO EPA	Rene Clevenger	3/17/88	7:45am
3					
4		APR 20 1988			
5					
		DIV. of SOLID & HAZ. WASTE MGT.			

WADSWORTH/ALERT
LABORATORIES, INC.

April 15, 1988

QUALITY CONTROL NARRATIVE

The base neutral acid analysis for sample 55784 showed one surrogate to be out of control. The laboratory surrogate spike criteria requires that two of the surrogates from each fraction must be in control and the third must be greater than ten percent recovery. This criteria is met with this sample so the method is considered to be in control.

Connie L. Hokanson
Quality Control Manager

lg

WADSWORTH/ALERT
LABORATORIES, INC.

MATRIX SPIKE DATA

LAB ID	PARAMETER	SPIKE PERCENT RECOVERY	SPK/DUP PERCENT RECOVERY	SPIKE MATRIX
55781	Mercury	94	98	WATER
55781	Selenium	63	65	WATER
55781	Lead	96	96	WATER
55781	Arsenic	103	101	WATER
55781	Silver	95	96	WATER
55781	Cadmium	108	107	WATER
55781	Chromium	125*	123*	WATER
55781	Barium	97	96	WATER
	CORRECTIVE ACTION**			
880411	Chromium	85	88	WATER

* - OUT OF CONTROL
** - LABORATORY SAMPLE, SAME MATRIX

WADSWORTH/ALERT
LABORATORIES, INC.

SURROGATE SPIKE DATA

LAB ID	1,2-DICHLOROETHANE-d4 RECOVERY	TOLUENE-d8 RECOVERY	BFB RECOVERY
55782	103	100	100
55784	119	97	105

RE - RE-ANALYSIS DIL - SPIKE DILUTED OUT NR - NOT REQUIRED
MS - MATRIX SPIKE MSD - MATRIX SPIKE/DUP
* - OUT OF CONTROL

WADSWORTH/ALERT
LABORATORIES, INC.

SURROGATE SPIKE DATA

LAB ID	NITRO-BENZENE-d5	2-FLUORO-BIPHENYL	TERPHENYL d14	PHENOL-d5	2-FLUORO-PHENOL	TRIBROMO-PHENOL
55782	68	68	46	69	36	52
55784	41	38	48	24	21 *	33

RE - RE-ANALYSIS DIL - SPIKE DILUTED OUT NR - NOT REQUIRED
MS - MATRIX SPIKE MSD - MATRIX SPIKE/DUP
* - OUT OF CONTROL

WADSWORTH/ALERT
LABORATORIES, INC.

MATRIX SPIKE RECOVERY
CONTROL LIMITS

PARAMETER	WATER RECOVERY CONTROL LIMITS	SOLID RECOVERY CONTROL LIMITS
Aluminum	84-110	77-117
Antimony	69-123	55-137
Arsenic	77-121	66-132
Arsenic by Graphite Furnace	77-121	66-132
Barium	79-113	70-121
Beryllium	72-116	61-128
Cadmium	81-110	73-117
Calcium	78-113	69-122
Chromium	71-115	60-126
Cobalt	93-109	89-113
Copper	81-111	73-118
Iron	81-112	73-120
Lead	73-120	61-132
Lead by Graphite Furnace	73-120	61-132
Magnesium	82-115	74-123
Manganese	81-113	73-121
Mercury	84-113	77-120
Molybdenum	79-123	68-134
Nickel	82-111	74-118
Potassium	81-116	72-124
Selenium	62-125	47-141
Selenium by Graphite Furnace	62-125	47-141
Silicon	83-112	76-119
Silver	74-116	63-126
Sodium	87-112	81-118
Strontium	83-114	75-122
Thallium	69-123	55-137
Tin	82-115	74-123
Vanadium	88-113	82-120
Zinc	78-113	69-122

WADSWORTH/ALERT
LABORATORIES, INC.

SURROGATE SPIKE RECOVERY CONTROL LIMITS

Surrogate Compound	Water Recovery Control Limits	Soil Recovery Control Limit
Toluene-d8	88-110	81-117
4-Bromofluorobenzene (BFB)	86-115	74-121
1,2-Dichloroethane-d4	76-114	70-121
Nitrobenzene-d5	35-114	23-120
2-Fluorobiphenyl	43-116	30-115
Terpehnyl-d14	33-141	18-137
Phenol-d5	10-94	24-113
2-Fluorophenol	21-100	25-121
2,4,6-Tribromophenol	10-123	19-122

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : Wadsworth/Alert Laboratories **RECEIVING DATE :** 3/28/88
LABORATORY ID : 9088-90328
SAMPLE MATRIX : WATER

SAMPLE ID : INTRA-LAB BLANK , 3 /28/88

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT
Silver	3/28/88	ND	0.01 mg/l
Barium	3/28/88	ND	0.01 mg/l
Cadmium	3/28/88	ND	0.01 mg/l
Chromium	3/28/88	ND	0.02 mg/l
Hexavalent Chrome	3/28/88	ND	0.02 mg/l
Copper	3/28/88	ND	0.01 mg/l
Mercury	3/28/88	ND	0.005 mg/l
Nickel	3/28/88	ND	0.04 mg/l
Lead	3/28/88	ND	0.05 mg/l
Selenium	3/28/88	ND	0.005 mg/l
Zinc	3/28/88	0.07	0.01 mg/l

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9088-90329
SAMPLE MATRIX : WATER

RECEIVING DATE : 3/29/88

SAMPLE ID : INTRA-LAB BLANK , 3 /29/88

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT	
Silver	3/29/88	ND	0.01	mg/l
Aluminum	3/29/88	ND	0.1	mg/l
Arsenic	3/29/88	ND	0.005	mg/l
Calcium	3/29/88	0.24	0.01	mg/l
Cobalt	3/29/88	ND	0.05	mg/l
Iron	3/29/88	0.19	0.05	mg/l
Magnesium	3/29/88	0.02	0.01	mg/l
Manganese	3/29/88	ND	0.01	mg/l
Sodium	3/29/88	0.03	0.01	mg/l
Nickel	3/29/88	ND	0.04	mg/l
Lead	3/29/88	ND	0.05	mg/l
Antimony	3/29/88	ND	0.2	mg/l
Selenium	3/29/88	ND	0.002	mg/l
Tin	3/29/88	ND	1	mg/l
Zinc	3/29/88	0.05	0.01	mg/l

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : Wadsworth/Alert Laboratories **RECEIVING DATE :** 3/30/88
LABORATORY ID : 9088-90330
SAMPLE MATRIX : WATER

SAMPLE ID : INTRA-LAB BLANK , 3 /30/88

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT
Silver	3/30/88	ND	0.01 mg/l
Aluminum	3/30/88	ND	0.1 mg/l
Arsenic	3/30/88	ND	0.005 mg/l
Barium	3/30/88	ND	0.01 mg/l
Beryllium	3/30/88	ND	0.005 mg/l
Calcium	3/30/88	0.13	0.01 mg/l
Cadmium	3/30/88	ND	0.01 mg/l
Chromium	3/30/88	ND	0.02 mg/l
Hexavalent Chrome	3/30/88	ND	0.02 mg/l
Copper	3/30/88	ND	0.01 mg/l
Iron	3/30/88	0.08	0.05 mg/l
Mercury	3/30/88	ND	0.005 mg/l
Manganese	3/30/88	0.14	0.01 mg/l
Nickel	3/30/88	ND	0.04 mg/l
Antimony	3/30/88	ND	0.2 mg/l
Thallium	3/30/88	ND	0.1 mg/l
Zinc	3/30/88	0.07	0.01 mg/l
Zirconium	3/30/88	ND	0.05 mg/l

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9588-95331
SAMPLE MATRIX : WATER

RECEIVING DATE : 3/31/88

SAMPLE ID : INTRA-LAB BLANK , 3/31/88

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT
Silver	3/31/88	ND	0.01 mg/l
Aluminum	3/31/88	ND	0.1 mg/l
Barium	3/31/88	ND	0.01 mg/l
Beryllium	3/31/88	ND	0.005 mg/l
Cadmium	3/31/88	ND	0.01 mg/l
Chromium	3/31/88	ND	0.02 mg/l
Copper	3/31/88	ND	0.01 mg/l
Iron	3/31/88	0.08	0.05 mg/l
Manganese	3/31/88	ND	0.01 mg/l
Nickel	3/31/88	ND	0.04 mg/l
Antimony	3/31/88	ND	0.2 mg/l
Tin	3/31/88	ND	1 mg/l
Thallium	3/31/88	ND	0.1 mg/l

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

METALS ANALYSIS REPORT

COMPANY : Wadsworth/Alert Laboratories **RECEIVING DATE :** 4/ 6/88
LABORATORY ID : 9588-95406
SAMPLE MATRIX : WATER

SAMPLE ID : INTRA-LAB BLANK , 4/6/88

ELEMENT	PREPARATION - ANALYSIS DATE	RESULT	DETECTION LIMIT
Barium	4/ 6/88	ND	0.01 mg/l
Calcium	4/ 6/88	0.25	0.01 mg/l
Magnesium	4/ 6/88	0.02	0.01 mg/l
Sodium	4/ 6/88	0.03	0.01 mg/l

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

HAZARDOUS SUBSTANCE LIST VOLATILE COMPOUNDS ANALYTICAL REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9288-92323
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/23/88
EXTRACTION DATE : 3/23/88
ANALYSIS DATE : 3/25/88

SAMPLE ID : INTRA-LAB BLANK , 3 /23/88

	RESULT (mg/kg)	DETECTION LIMIT
Chloromethane	ND	1
Bromomethane	ND	1
Vinyl chloride	ND	1
Chloroethane	ND	1
Methylene chloride	ND	1
Acetone	1	1
Carbon disulfide	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
1,2-Dichloroethane	ND	1
2-Butanone	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Vinyl acetate	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
trans-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
Dibromochloromethane	ND	1
1,1,2-Trichloroethane	ND	1
Benzene	ND	1
cis-1,3-Dichloropropene	ND	1
Bromoform	ND	1
4-Methyl-2-pentanone	ND	1
2-Hexanone	ND	1
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Toluene	ND	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Styrene	ND	1
Total Xylenes	ND	1

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

HAZARDOUS SUBSTANCE LIST VOLATILE COMPOUNDS ANALYTICAL REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9288-92323
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/23/88
EXTRACTION DATE : 3/23/88
ANALYSIS DATE : 3/29/88

SAMPLE ID : INTRA-LAB BLANK , 3 /23/88

	RESULT (mg/kg)	DETECTION LIMIT
Chloromethane	ND	1
Bromomethane	ND	1
Vinyl chloride	ND	1
Chloroethane	ND	1
Methylene chloride	1	1
Acetone	ND	10
Carbon disulfide	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
1,2-Dichloroethane	ND	1
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Vinyl acetate	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
trans-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
Dibromochloromethane	ND	1
1,1,2-Trichloroethane	ND	1
Benzene	ND	1
cis-1,3-Dichloropropene	ND	1
Bromoform	ND	1
4-Methyl-2-pentanone	ND	1
2-Hexanone	ND	1
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Toluene	1	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Styrene	ND	1
Total Xylenes	ND	1

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

SEMI-VOLATILE ANALYTICAL REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9288-92317
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/18/88

SAMPLE ID : INTRA-LAB BLANK , 3 /17/88

	RESULT (mg/kg)	DETECTION LIMIT
Acenaphthene	ND	10
Acenaphthylene	ND	10
Anthracene	ND	10
Benzidine	ND	50
Benzo(a)anthracene	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(ghi)perylene	ND	10
Benzo(a)pyrene	ND	10
Bis(2-chloroethoxy)methane	ND	10
Bis(2-chloroethyl)ether	ND	10
Bis(2-chloroisopropyl)ether	ND	10
Bis(2-ethylhexyl)phthalate	ND	10
4-Bromophenyl phenyl ether	ND	10
Butyl benzyl phthalate	ND	10
2-Chloronaphthalene	ND	10
4-Chlorophenyl phenyl ether	ND	10
Chrysene	ND	10
Dibenzo(a,h)anthracene	ND	10
Di-n-butyl phthalate	ND	10
1,2-Dichlorobenzene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
3,3'-Dichlorobenzidine	ND	50
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
2,4-Dinitrotoluene	ND	10
2,6-Dinitrotoluene	ND	10
Di-n-octyl phthalate	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-CD)pyrene	ND	10
Isophorone	ND	10
Naphthalene	ND	10
Nitrobenzene	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitrosodiphenylamine	ND	10
N-Nitrosodi-n-propylamine	ND	10
Phenanthrene	ND	10
Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

ACID ANALYTICAL REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9288-92317
SAMPLE MATRIX : SOLID

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/18/88

SAMPLE ID : INTRA-LAB BLANK , 3 /17/88

	RESULT (mg/kg)	DETECTION LIMIT
4-Chloro-3-methylphenol	ND	10
2-Chlorophenol	ND	10
2,4-Dichlorophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dinitrophenol	ND	50
2-Methyl-4,6-dinitrophenol	ND	50
2-Nitrophenol	ND	10
4-Nitrophenol	ND	50
Pentachlorophenol	ND	50
Phenol	ND	10
2,4,6-Trichlorophenol	ND	10

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

SEMI-VOLATILE ANALYTICAL REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9288-92317
SAMPLE MATRIX : OIL

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : INTRA-LAB BLANK , 3 /17/88

	RESULT (mg/kg)	DETECTION LIMIT
Acenaphthene	ND	1000
Acenaphthylene	ND	1000
Anthracene	ND	1000
Benzidine	ND	5000
Benzo(a)anthracene	ND	1000
Benzo(b)fluoranthene	ND	1000
Benzo(k)fluoranthene	ND	1000
Benzo(ghi)perylene	ND	1000
Benzo(a)pyrene	ND	1000
Bis(2-chloroethoxy)methane	ND	1000
Bis(2-chloroethyl)ether	ND	1000
Bis(2-chloroisopropyl)ether	ND	1000
Bis(2-ethylhexyl)phthalate	ND	1000
4-Bromophenyl phenyl ether	ND	1000
Butyl benzyl phthalate	ND	1000
2-Chloronaphthalene	ND	1000
4-Chlorophenyl phenyl ether	ND	1000
Chrysene	ND	1000
Dibenzo(a,h)anthracene	ND	1000
Di-n-butyl phthalate	ND	1000
1,2-Dichlorobenzene	ND	1000
1,3-Dichlorobenzene	ND	1000
1,4-Dichlorobenzene	ND	1000
3,3'-Dichlorobenzidine	ND	5000
Diethyl phthalate	ND	1000
Dimethyl phthalate	ND	1000
2,4-Dinitrotoluene	ND	1000
2,6-Dinitrotoluene	ND	1000
Di-n-octyl phthalate	ND	1000
Fluoranthene	ND	1000
Fluorene	ND	1000
Hexachlorobenzene	ND	1000
Hexachlorobutadiene	ND	1000
Hexachlorocyclopentadiene	ND	1000
Hexachloroethane	ND	1000
Indeno(1,2,3-CD)pyrene	ND	1000
Isophorone	ND	1000
Naphthalene	ND	1000
Nitrobenzene	ND	1000
N-Nitrosodimethylamine	ND	1000
N-Nitrosodiphenylamine	ND	1000
N-Nitrosodi-n-propylamine	ND	1000
Phenanthrene	ND	1000
Pyrene	ND	1000
1,2,4-Trichlorobenzene	ND	1000

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

256

ACID ANALYTICAL REPORT

COMPANY : Wadsworth/Alert Laboratories
LABORATORY ID : 9288-92317
SAMPLE MATRIX : OIL

RECEIVING DATE : 3/17/88
EXTRACTION DATE : 3/17/88
ANALYSIS DATE : 3/21/88

SAMPLE ID : INTRA-LAB BLANK , 3 /17/88

	RESULT (mg/kg)	DETECTION LIMIT
4-Chloro-3-methylphenol	ND	1000
2-Chlorophenol	ND	1000
2,4-Dichlorophenol	ND	1000
2,4-Dimethylphenol	ND	1000
2,4-Dinitrophenol	ND	5000
2-Methyl-4,6-dinitrophenol	ND	5000
2-Nitrophenol	ND	1000
4-Nitrophenol	ND	5000
Pentachlorophenol	ND	5000
Phenol	ND	1000
2,4,6-Trichlorophenol	ND	1000

ND - NONE DETECTED

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

5RC

Mr. Thomas Heaton
Environmental Specialist
Borden, Inc.
180 East Broad Street
Columbus, OH 43215

Re: Borden claim of confidentiality on Superfund notifications

Dear Mr. Heaton:

Enclosed are the original 1979 Eckhardt Surveys which you submitted marked as confidential on June 3, 1981, pursuant to §103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, for the Borden facilities listed in attachment 1. Also enclosed are copies of sixty-seven (67) EPA §103(c) notification forms which the Office of Superfund has filled out for each Borden site with appropriate information extracted from your submittals. EPA has transferred only very general information to our notification forms. EPA has also attached both a copy of this letter and your June 3, 1981, cover letter to each of the 8900-1 forms retained in our records for purposes of §103 notification compliance verification. We request that you review the forms 8900-1 for accuracy and advise us of any necessary corrections.

The Eckhardt Surveys which you claim as confidential contain information beyond that required by the EPA form. Therefore, we are returning the surveys to you. Since we have not retained any copies, they are no longer a part of agency records subject to possible disclosure pursuant to 40 C.F.R. Part 2.

With respect to the information transferred to the EPA notification form, please advise me within 10 days of your receipt of this letter whether you assert a claim of business confidentiality pursuant to 40 C.F.R. Part 2. It is EPA's intention to be able, upon request, to promptly release information submitted in the notification form to the extent provided by law. See 46 Federal Register 22149 (April 15, 1981).

If it is your intent to assert a claim, please give particular attention to 40 C.F.R. §2.201 and 2.204(e)(3) concerning claim substantiation.

Please feel free to call me if you have any questions on this matter.

Sincerely yours,

David M. Sims
Assistant Regional Counsel

Enclosures

USEPA Region 5
Hazardous Waste Site Notification under Superfund
Submissions for Borden Chemical Facilities

Facility	Location
Printing Ink Division	Cincinnati, OH
Printing Ink Division (Galbraith Rd.)	Cincinnati, OH
Printing Ink Division	Menasha, WI
Printing Ink Division	Portage, MI
Printing Ink Division	St. Charles, IL
Thermoplastics Division	Illiopolis, IL
Adhesives and Chemicals Division	Delaware, OH
Adhesives and Chemicals Division	Cicero, IL
Adhesives and Chemicals Division	Sheboygan, WI
Smith-Douglass Division	Streator, IL
Columbus Coated Fabrics Division	Columbus, OH
Smith-Douglass Division	Hampshire, IL
Printing Ink Division	Whitehouse, OH

Past Borden Chemical Facilities

Lustro-Ware	Columbus, OH
Smith-Douglass Division	Riga, MI
Smith-Douglass Division	Saginaw, MI
Smith-Douglass Division	Holland, MI

BORDEN INC
180 EAST BROAD STREET, COLUMBUS, OHIO 43215

THOMAS R. HEATON
ENVIRONMENTAL SPECIALIST
ENVIRONMENTAL AFFAIRS

June 3, 1981

USEPA Region 5
Sites Notification
Chicago, IL 60604

Re: Hazardous Waste Site Notification under "Superfund"
Submission of the Eckhardt Survey

Dear Sirs:

The enclosed questionnaires were completed in 1979 by Borden Chemical facilities in your region in response to the survey (Eckhardt Survey) by the House Interstate and Foreign Commerce Committee. These documents are being submitted in compliance with the hazardous waste site notification requirement under Section 103(c) of the Comprehensive Emergency Response, Compensation and Liability Act of 1980. Attached hereto is a list of the present Borden locations, as well as past Borden locations at which wastes were disposed, for which submissions are made.

We trust this submission is adequate. If you have any questions, please contact the undersigned at (614) 225-4860.

Very truly yours,

Thomas R Heaton

Thomas R. Heaton

TRH:kjm

Enclosures

Side Two

... of Hazardous Waste Site

... boxes to ... types found at the site. ... "... amount" space ... quantity ... wastes at the site ... gallons.

... area" space, give the ... the facilities ... feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) ______

Total Facility Waste Amount

cubic feet ______

gallons ______

Total Facility Area

square feet ______

acres ______

... Suspected or Likely Releases to the Environment:

... an X in the appropriate boxes to indicate any known, suspected, ... releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing ... waste sites. Although completing the items is not required, you are encouraged to do so.

... Map of Site Location: (Optional)

... showing streets, highways, ... prominent landmarks near ... Place an X on the map to indicate ... Draw an arrow showing ... north. You may substitute a ... map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name ______

Street ______

City ______ State ______ Zip Code ______

Signature ______ Date ______

present see attachment

☐ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

Printing Ink

EPA Notification of Hazardous Waste Site

E

United States Environmental Protection Agency Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space use separate sheets of paper. Indicate the letter of the item which applies. 810609

OH-77 OHS-000-001-549

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

OHD980615801

Name Borden Chemical

Street 6225 Gilcan

City Whitehouse State OH Zip Code 43571

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site Mason Septic Service

Street 7202 Providence

City Whitehouse County Lucas State OH Zip Code 43571

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title) Shadle, Tom Plt. Mgr.

Phone (414) 877-5392

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year) 1974 To (Year) 1977

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste: Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste: Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste: EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

001039 JBI-981

N

Form Approved OMB No. 2060-0138

EPA Form 8900-1

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

5RC

Mr. Thomas Heaton
Environmental Specialist
Borden, Inc.
180 East Broad Street
Columbus, OH 43215

Re: Borden claim of confidentiality on Superfund notifications

Dear Mr. Heaton:

Enclosed are the original 1979 Eckhardt Surveys which you submitted marked as confidential on June 3, 1981, pursuant to §103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, for the Borden facilities listed in attachment 1. Also enclosed are copies of sixty-seven (67) EPA §103(c) notification forms which the Office of Superfund has filled out for each Borden site with appropriate information extracted from your submittals. EPA has transferred only very general information to our notification forms. EPA has also attached both a copy of this letter and your June 3, 1981, cover letter to each of the 8900-1 forms retained in our records for purposes of §103 notification compliance verification. We request that you review the forms 8900-1 for accuracy and advise us of any necessary corrections.

The Eckhardt Surveys which you claim as confidential contain information beyond that required by the EPA form. Therefore, we are returning the surveys to you. Since we have not retained any copies, they are no longer a part of agency records subject to possible disclosure pursuant to 40 C.F.R. Part 2.

With respect to the information transferred to the EPA notification form, please advise me within 10 days of your receipt of this letter whether you assert a claim of business confidentiality pursuant to 40 C.F.R. Part 2. It is EPA's intention to be able, upon request, to promptly release information submitted in the notification form to the extent provided by law. See 46 Federal Register 22149 (April 15, 1981).

If it is your intent to assert a claim, please give particular attention to 40 C.F.R. §2.201 and 2.204(e)(3) concerning claim substantiation.

Please feel free to call me if you have any questions on this matter.

Sincerely yours,

David M. Sims
Assistant Regional Counsel

Enclosures

USEPA Region 5
Hazardous Waste Site Notification under Superfund
Submissions for Borden Chemical Facilities

Facility	Location
Printing Ink Division	Cincinnati, OH
Printing Ink Division (Galbraith Rd.)	Cincinnati, OH
Printing Ink Division	Menasha, WI
Printing Ink Division	Portage, MI
Printing Ink Division	St. Charles, IL
Thermoplastics Division	Illiopolis, IL
Adhesives and Chemicals Division	Delaware, OH
Adhesives and Chemicals Division	Cicero, IL
Adhesives and Chemicals Division	Sheboygan, WI
Smith-Douglass Division	Streator, IL
Columbus Coated Fabrics Division	Columbus, OH
Smith-Douglass Division	Hampshire, IL
Printing Ink Division	Whitehouse, OH

Past Borden Chemical Facilities

Lustro-Ware	Columbus, OH
Smith-Douglass Division	Riga, MI
Smith-Douglass Division	Saginaw, MI
Smith-Douglass Division	Holland, MI

BORDEN INC
180 EAST BROAD STREET, COLUMBUS, OHIO 43215

THOMAS R. HEATON
ENVIRONMENTAL SPECIALIST
ENVIRONMENTAL AFFAIRS

June 3, 1981

USEPA Region 5
Sites Notification
Chicago, IL 60604

Re: Hazardous Waste Site Notification under "Superfund"
Submission of the Eckhardt Survey

Dear Sirs:

The enclosed questionnaires were completed in 1979 by Borden Chemical facilities in your region in response to the survey (Eckhardt Survey) by the House Interstate and Foreign Commerce Committee. These documents are being submitted in compliance with the hazardous waste site notification requirement under Section 103(c) of the Comprehensive Emergency Response, Compensation and Liability Act of 1980. Attached hereto is a list of the present Borden locations, as well as past Borden locations at which wastes were disposed, for which submissions are made.

We trust this submission is adequate. If you have any questions, please contact the undersigned at (614) 225-4860.

Very truly yours,

Thomas R Heaton

Thomas R. Heaton

TRH:kjm

Enclosures

USEPA Region 5
Hazardous Waste Site Notification under Superfund
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Thermoplastics Division	Illiopolis, IL
Adhesives and Chemicals Division	Delaware, OH
Adhesives and Chemicals Division	Cicero, IL
Adhesives and Chemicals Division	Sheboygan, WI
Smith-Douglass Division	Streator, IL
Columbus Coated Fabrics Division	Columbus, OH
Smith-Douglass Division	Hampshire, IL
Printing Ink Division	Whitehouse, OH

Past Borden Chemical Facilities

Lustro-Ware	Columbus, OH
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Smith-Douglass Division	Holland, MI

BORDEN INC
180 EAST BROAD STREET, COLUMBUS, OHIO 43215

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We trust this submission is adequate. If you have any questions, please contact the undersigned at (614) 225-4860.

Very truly yours,

Thomas R Heaton

Thomas R. Heaton

TRH:kjm

Enclosures

F Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet _____

gallons _____

Total Facility Area

square feet _____

acres _____

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment

☐ Known ☐ Suspected ☐ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name _____

Street _____

City _____ State _____ Zip Code _____

Signature present see attachment Date _____

☐ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

EPA Notification of Hazardous Waste Site

E

810609

United States Environmental Protection Agency Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

OH#78 OHS-000-001-550

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name Borden Chemical

Street 6725 Gilean

City Whitehouse, State OH. Zip Code 43521

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site Cousin's Waste Mgt.

Street 2611 W. Center

OHD068081595

City Toledo, County LUCAS State OH. Zip Code 43609

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title) Shadle, Tom, Plt. Mgr.

Phone (414) 877-5392

419

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year) 1978 To (Year) 1979

E Waste Type: Choose the option you prefer to complete.

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
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6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

_____
_____
_____

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
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6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
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11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

_____
_____
_____

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

001041 JUN-9 81

Form Approved
OMB No. 2000-0138
EPA Form 8900-1

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

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If it is your intent to assert a claim, please give particular attention to 40 C.F.R. §2.201 and 2.204(e)(3) concerning claim substantiation.

Please feel free to call me if you have any questions on this matter.

Sincerely yours,

David M. Sims
Assistant Regional Counsel

Enclosures

USEPA Region 5
Hazardous Waste Site Notification under Superfund
Submissions for Borden Chemical Facilities

Facility	Location
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Printing Ink Division	St. Charles, IL
Thermoplastics Division	Illiopolis, IL
Adhesives and Chemicals Division	Delaware, OH
Adhesives and Chemicals Division	Cicero, IL
Adhesives and Chemicals Division	Sheboygan, WI
Smith-Douglass Division	Streator, IL
Columbus Coated Fabrics Division	Columbus, OH
Smith-Douglass Division	Hampshire, IL
Printing Ink Division	Whitehouse, OH

Past Borden Chemical Facilities

Lustro-Ware	Columbus, OH
Smith-Douglass Division	Riga, MI
Smith-Douglass Division	Saginaw, MI
Smith-Douglass Division	Holland, MI

BORDEN INC
180 EAST BROAD STREET, COLUMBUS, OHIO 43215

THOMAS R. HEATON
ENVIRONMENTAL SPECIALIST
ENVIRONMENTAL AFFAIRS

June 3, 1981

USEPA Region 5
Sites Notification
Chicago, IL 60604

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Very truly yours,

Thomas R Heaton

Thomas R. Heaton

TRH:kjm

Enclosures

USEPA Region 5
Hazardous Waste Site Notification under Superfund
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Facility	Location
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Printing Ink Division	St. Charles, IL
Thermoplastics Division	Illiopolis, IL
Adhesives and Chemicals Division	Delaware, OH
Adhesives and Chemicals Division	Cicero, IL
Adhesives and Chemicals Division	Sheboygan, WI
Smith-Douglass Division	Streator, IL
Columbus Coated Fabrics Division	Columbus, OH
Smith-Douglass Division	Hampshire, IL
Printing Ink Division	Whitehouse, OH

Past Borden Chemical Facilities

Lustro-Ware	Columbus, OH
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Smith-Douglass Division	Holland, MI

BORDEN INC
180 EAST BROAD STREET, COLUMBUS, OHIO 43215

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ENVIRONMENTAL AFFAIRS

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We trust this submission is adequate. If you have any questions, please contact the undersigned at (614) 225-4860.

Very truly yours,

Thomas R Heaton

Thomas R. Heaton

TRH:kjm

Enclosures

...ation of Hazardous Waste Site

Side Two

...Quantity:

...X in the appropriate boxes to ...the facility types found at the site.

..."total facility waste amount" space ...estimated combined quantity ...of hazardous wastes at the site ...in feet or gallons.

..."total facility area" space, give the ...ed area size which the facilities ...using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

~~cubic feet~~ _____

gallons _____

Total Facility Area

square feet _____

acres _____

...Suspected or Likely Releases to the Environment:

...X in the appropriate boxes to indicate any known, suspected, ...releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☐ None

...ems H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing ...s waste sites. Although completing the items is not required, you are encouraged to do so.

...Map of Site Location: (Optional)

...a map showing streets, highways, ...other prominent landmarks near ...Place an X on the map to indicate ...location. Draw an arrow showing ...north. You may substitute a ...ing map showing the site location.

...ription of Site: (Optional)

...the history and present ...of the site. Give directions to ...and describe any nearby wells, ...ses, or housing. Include such ...as how waste was disposed ...the waste came from. Provide ...information or comments which ...describe the site conditions.

...e and Title:

...or authorized representative ...ant managers, superintendents, ...attorneys) of persons required ...st sign the form and provide a ...ess (if different than address ...or other persons providing ...the signature is optional. ...oxes which best describe the ...to the site of the person ...notify. If you are not required ...ck "Other".

Name _____

Street _____

City _____ State _____ Zip Code _____

Signature _____ Date _____

☐ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Pres
☐ Operator, Pas
☐ Other

Ab Borden

EPA Notification of Hazardous Waste Site E

United States
Environmental Protection
Agency
Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

8/0607

OH# 81 OHS-000-001-553

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name Borden Chemical
Street 6725 Gilean
City Whitehouse State OH. Zip Code 43521

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site Robert O'Berle Waste Removal
Street 3903 Stickney
City Toledo County Lucas State OH Zip Code 43608

OHD980615934

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title) Shadle, Tom Plt. Mgr.
Phone (414) 877-5392

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year) 1956 To (Year) 1969

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

_____
_____
_____

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
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4. ☐ Fertilizer
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6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

_____
_____
_____

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Specific Type of Waste:
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001044 JUN-981

NI

Form Approved
OMB No. 2000-0138
EPA Form 8900-1

I

inter-office communication

Kevin O'Grady, DSHWM, CO date: 9/30/85

from: Dave Ferguson, NWDO

subject: Borden Chemical Printing Ink 03-48-0146

I spoke to Paula today about getting credit for doing an inspection of this facility. She said we would get credit for the inspection since I went there August 19, 1985. I walked the perimeter of the property and took a photo of the old hazardous waste storage area. There was no sign of hazardous waste anywhere on the site.

I had worked with the facility to withdraw their permit and did a TSD inspection as a formality last year even though they were close to being an SQG. I did not know they were completely closed. I have enclosed the inspection form for your files. I was never on their property, so Paula said no need to copy them.

/eb

File

Aug 6, 85, AM
Date of Time of Inspection

RCRA INTERIM STATUS INSPECTION FORM

HWFAB # 03-48-0146

U.S. EPA I.D. # OHD 005 043 740

GENERAL INFORMATION

Facility: Borden Chemical Printing Ink Address: 6725 Gilead ST. City: Whitehouse

State: OH Zip Code: 43571 County: Lucas Telephone: 419-877-5392

INSPECTION PARTICIPANT(S)

	(Name)	(Title)	(Telephone)
1.			
2.			
3.			

INSPECTOR(S)

1.	Dave Ferguson	Div. of Sol + H.W. Mgt.	419-352-8461
2.			
3.			

INSTALLATION ACTIVITY

Mark One

- [ ] Generator only (G)
- [ ] Transporter (T)
- [ ] TSDF only
- [ ] G-T
- [x] G-TSDF
- [ ] T-TSDF
- [ ] G-T-TSDF

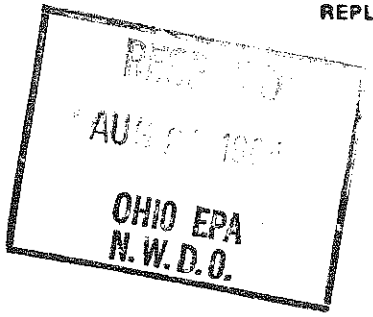
If the site is a TSDF, check the boxes indicating which areas were reviewed.

- [ ] General Facility Standards, Preparedness and Prevention, Contingency and Emergency Manifests/Records/Reporting, Closure
- [x] Containers S01
- [ ] Tanks S02/T01
- [ ] Surface Impoundments S04/T02
- [ ] Incineration/Thermal Treatment
- [ ] Waste Piles S03
- [ ] Land Treatment D01
- [ ] Landfills D80
- [ ] Chemical/Physical/ Biological T04
- [ ] Groundwater Monitoring
- [ ] Post-Closure

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

5HW-13



21 AUG 1984

Mr. Ben Chambers
Ohio Environmental Protection Agency
Northwest District
1035 Deviac Grove Drive
Bowling Green, Ohio 43402

Dear Mr. Chambers:

Per my telephone conversation with your office on August 20, 1984, I am sending you a copy of the closure plans and related background materials for the facilities listed below to be made available to the public at the Northwest District office through October 1, 1984. I am enclosing advance copies of the Public Notices which will be published in the following newspapers:

Borden Chemical-August 31, 1984, in the TOLEDO BLADE;
PPG Industries-August 29, 1984, in the CRESTLINE ADVOCATE;
Whirpool Corporation-August 31, 1984, in the FINDLAY COURIER;
Continental Forest-August 31, 1984, in the VAN WERT TIMES-BULLETIN.

Ms. Rebecca Strom of U.S. Environmental Protection Agency has coordinated our efforts with your State of Ohio office regarding these closures.

Please return the materials in the enclosed self-addressed envelope following the close of the 30-day comment period on October 1, 1984. Also, please let me know that you have received these materials by completing and signing the enclosed verification form. The form should be returned to me in the self-addressed, postage and fees paid envelope.

returned 8/23/84

Thank you very much for your cooperation in assisting our effort to serve the public, and please contact me on (312) 886-3715, if you have any questions or require further assistance.

Sincerely,

Christine Klemme

Christine Klemme
Environmental Protection Assistant

Enclosures

Material returned 10/1/84. Jan Whit

No Lookers.